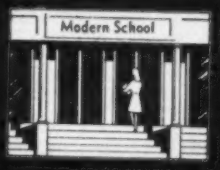
SCHOOL PROGRESS



The Spotlight on Education

Why Education Has Failed

How Much Should Pupils Know At the End of the Elementary Stage

The Role of the Principal in Guidance

Victoria Composite High School

Mount Royal High School

Protection of School Children From Fire

Association of School Business Officials

No. 4 AUGUST-SEPTEMBER 1951

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125	•	•	1	2	•	•	440	438	20	34
150	7	7	•	•	14½P	16½P	431	438½	27	•
200	212C	214C	70	70	14½MP	16½MP	422	458	218	35
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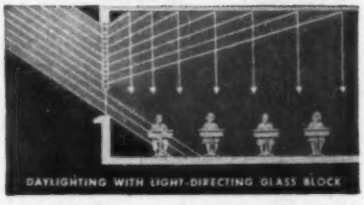

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SCHOOL PROGRESS

THE NATIONAL BUSINESS MAGAZINE OF CANADIAN SCHOOLS

No. 4 AUGUST-SEPTEMBER, 1951 Volume XX

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CCAB

Although we do not necessarily agree with all statements made in the columns of "School Progress", we believe that they are of sufficient interest and importance to bring to the attention of readers.—The Editor.

Editor ..... **Harry F. Coles, B.A.**

Editorial and Business Offices ..... **57 Bloor St. West, Toronto, Ont.**

SCHOOL PROGRESS is an independent publication, for principals, headmasters, inspectors, school board chairmen, secretaries, business administrators and purchasing agents, building superintendents, school architects, superintendents, secretaries and directors of education, and school supply houses throughout Canada.

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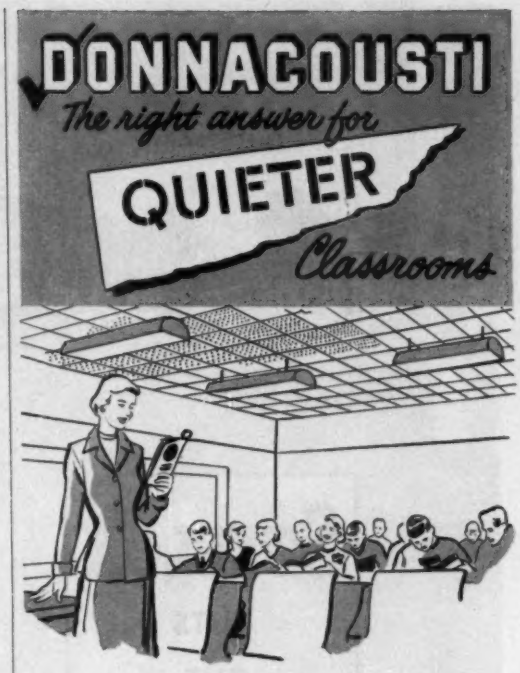

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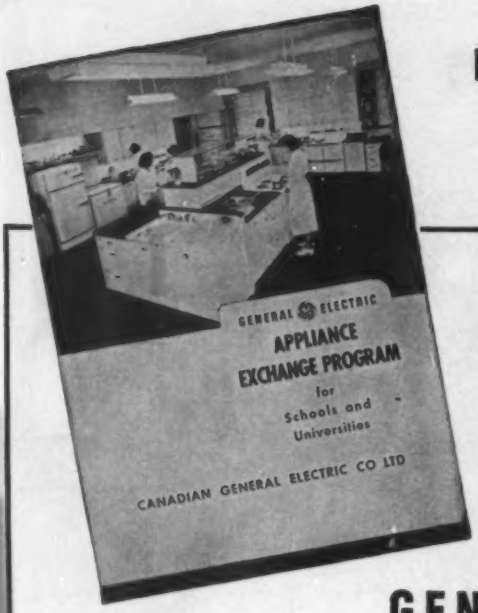

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THE SPOTLIGHT ON EDUCATION

Conducted by the Editor

Mr. H. A. Halbert, Public School Inspector, York County, Ontario, has been honoured by having a new school recently opened in his inspectorate named after him by popular demand.

Miss Marion Gimby has the distinction of being the first woman elected President of the Alberta Teachers' Association.

Dr. David S. Wood, Dean of the Faculty of Education, University of Manitoba, retired at the end of the 1950-51 session.

Dr. Neville Scarfe of the Institute of Education, University of London, has been appointed Dean of the Faculty of Education, University of Manitoba, to succeed Dr. David S. Wood.

Dr. A. R. Lord, former principal of the Vancouver Normal School, gave a special summer course series of lectures to Manitoba teachers in July, entitled "The World of Today."

Messrs. R. P. Albert and **M. Raymond Cossett** of the Board of Roman Catholic School Commissioners, Quebec City; **Treffé Boulanger,** Director of Studies, and **Abbé Irenée Lucier** of the Catholic School Commission of Montreal; **Abbé C-E Pourgeoys** of Three Rivers, Que., attended the Congre International de l'enfance Catholique held in Madrid, Spain, April last.

Mr. Frank Patten, Secretary-Treasurer and Business Administrator of the Collegiate Institute Board, Ottawa, has returned from two years' service in Ethiopia as Deputy Director General of Education.

Dr. W. P. Percival, Director of Protestant Education in Quebec, delivered the third series of Quance Lectures in Canadian Education at the University of Saskatchewan this spring.

Mr. A. M. Ross, on the staff of the Lakehead Technical Institute, Port Arthur, Ontario, and Mr. W. W. McCutcheon of the Maritimes and presently completing work on his D.Ed. at Cornell University, have been selected as recipients of the Imperial Relations Trust Fellowship for study at the University of London, Institute of Education, in 1951-52.

Mr. W. Norman McGillivray has been elected President of the Saskatchewan School Trustees Association for the third consecutive year.

Mr. Edward Fawcett Henderson, for twenty-eight years Secretary-Treasurer and Business Administrator of the Toronto and Suburban Separate School Board, died June 16th in Toronto.

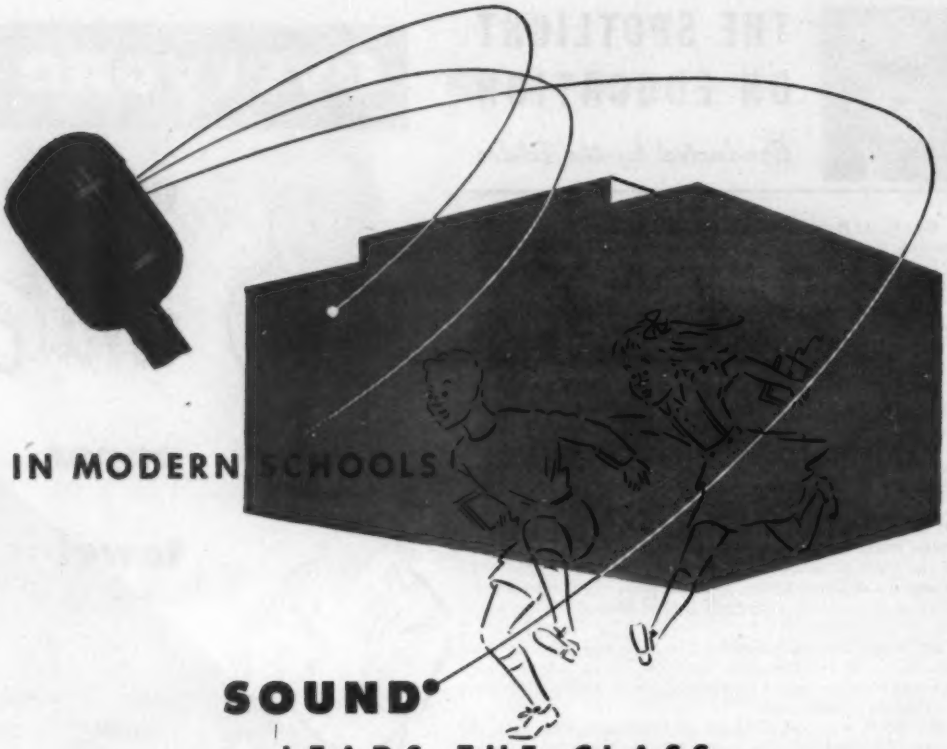
Dr. C. G. Stogdill, former chief of the Mental Health Division of the Department of Health and Welfare, Ottawa, has been appointed psychiatrist to the Board of Education, Toronto.

Mr. N. G. S. Ingram, Managing Director of Ginn & Company, book publishers, has been elected President of the Ontario School Trustees and Ratepayers Association.

Dr. M. E. LaZerte of the C.E.A. has been appointed by the joint committee of the National Conference of Canadian Universities and the C.E.A. to undertake a study of university entrance requirements and the articulation of the high schools and universities.

Dr. Leon Lortie of the University of Montreal will represent the National Conference of Canadian Universities in the study undertaken by Dr. LaZerte mentioned above.

Mr. F. S. Keirstead, principal of Sussex Composite High School in New Brunswick, has been honoured by having his school awarded the Strathcona Silver Shield in competition with all other graded schools in the province.



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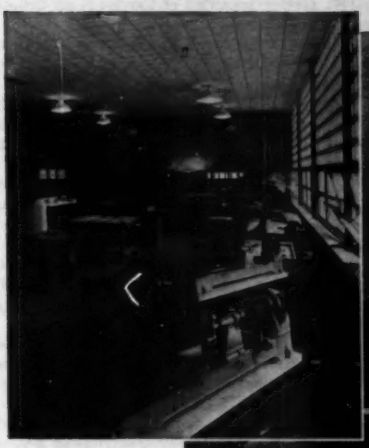

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Commercial Classroom. Walls finished in C-I-L Semi-Gloss Lightone Green; doors, radiator casings and other trim in C-I-L Dado Enamel Green.

The new St. Lawrence High School for suburban students in the Township of Cornwall, Ont., embodies the most recent principles of school design. Planned by H. H. Roberts, it now serves 600 students, and by the end of 1953 will be doubled in size to accommodate 1,000.

Noteworthy features are air conditioning; glass blocks for window walls; acoustic ceilings; mastic tiles and linoleum on floors; metal radiator casings.

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"The design has been enhanced through the use of colour," says Mr. Roberts. "Colour Conditioning has been of inestimable help, and has enabled us to carry to completion an ideal color scheme for this school."

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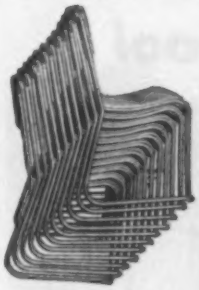

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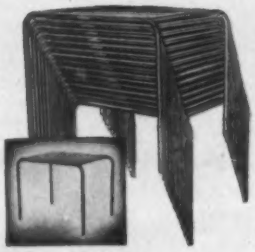

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THE SPOTLIGHT . . . . . .

Mr. Irvin Knapp, for nineteen years secondary school inspector for Manitoba, died on May 2nd.

Mr. A. D. Russell, former principal of Cardell High School, Manitoba, died May 6th.

Mr. D. Roy Kennedy of Ottawa was elected president of the Ontario Urban and Rural School Trustees Association at their Annual Convention, June 25-27.

Mr. J. M. McGrigor, Business Administrator of the Galt Board of Education, was elected President of the Ontario Association of School Business Officials at their Annual Meeting, June 25-27.

Dr. Stewart Tweedie, Director of Department of University Extension and Adult Education, University of Manitoba, has been named chairman of an advisory committee recently set up by the National Film Board of Canada.

Dr. W. J. Dunlop, Director of University Extension, University of Toronto, and one of the best known men in education in Canada, retired at the end of the 1951 university session.

Mr. J. Royden Gilley, associated with the University of Toronto for the past thirty years and since 1948 Associate Director of University Extension, has been appointed to succeed Dr. Dunlop, retired.

Mrs. May Neal of Regina has been appointed editor of "The School Trustees," magazine of the Saskatchewan School Trustees' Association.

* * * *

Ontario Association of School Business Officials

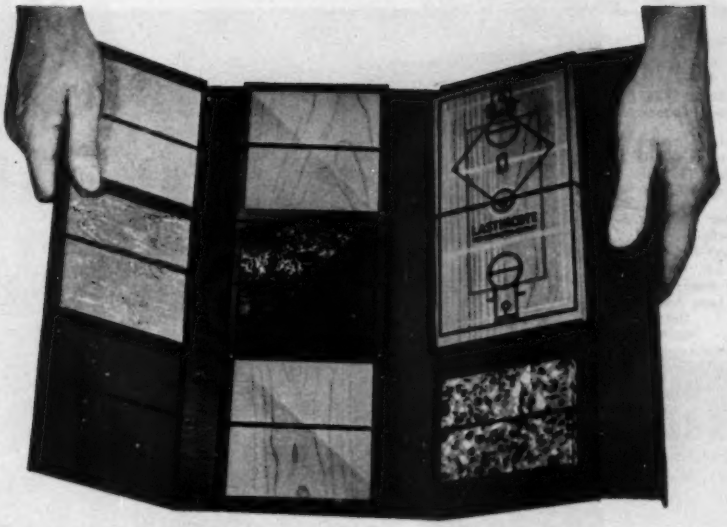
The Eighth Annual Convention of the Ontario Association of School Business Officials was held at Bigwin Inn from June 24th to the 27th, 1951. This date was arranged to coincide with the sessions of the Urban School Trustees' Association, which organization met in Convention at the same time. The telescoping of these sessions was in the nature of an experiment this year, with the result that the programme had to be curtailed in order to meet time requirements.

Under the Chairmanship of President James Swinton, Brantford, a splendid set-up of subject matter and selection of speakers was provided, and it was with deep regret to all concerned that the time available did not permit of the usual discussion periods which are so beneficial to all and particularly to the smaller school boards, many of whom are now meeting problems which the officials of larger centres have met and dealt with.

The membership of the Officials' Association is noticeably on the increase. Approximately 70 members were present, out of a total membership of 92.

The Exhibitors Association, associate members of the Officials' organization, again contributed a large share to the activities of the Convention. This Association now has a membership of forty-five firms, thirty-one exhibitors showing at the Convention. Gordon McEachern and his Committee are to be congratulated upon the programme of entertainment provided after the banquet on Tuesday evening.

Mr. T. Clift, First Assistant Superintendent, Board of Education, Atlanta, Georgia, President of the International Association, and Secretary-Treasurer Harley Anderson, Kalamazoo, Michigan, were popular guests of the Officials this year. Mr. Clift brought greetings from



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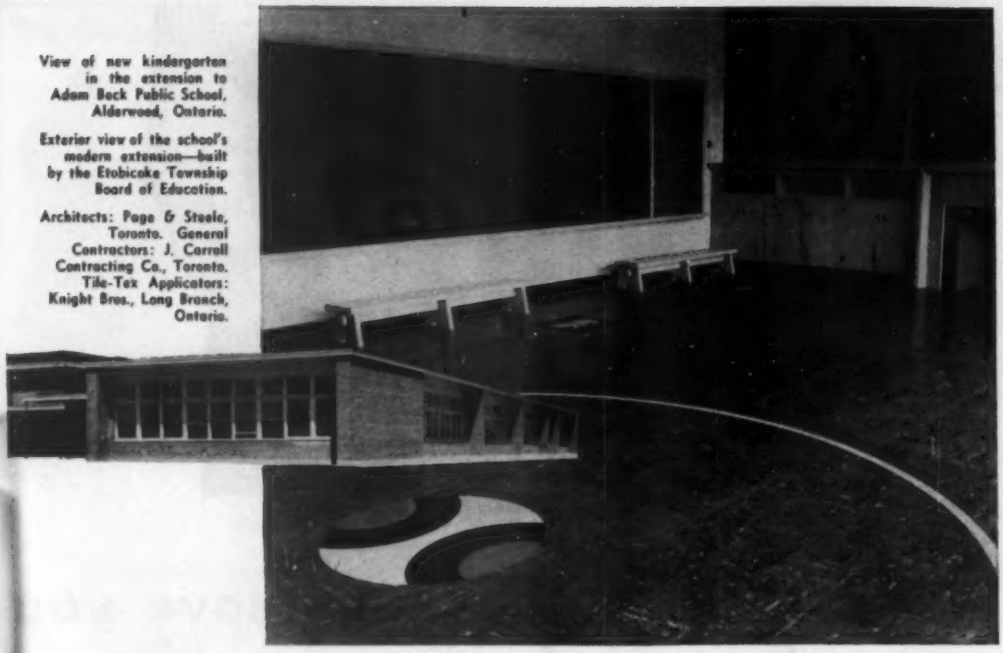

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THE SPOTLIGHT . . . . . .

the International, and State Associations of Texas and California, stating that members from the United States were coming to the Toronto Convention in large numbers. He stressed the importance of all the Canadian group supporting the Convention of the parent organization, to be held in Toronto, October 15th—18th.

The following officers of O.A.S.B.O. were elected for the ensuing year:

Past President—J. Swinton, Brantford
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Vice-President—P. M. Muir, York Township
Secretary-Treasurer—Albert Hodgins, Toronto
Directors — C. R. Marchant, Weston; G. E. Haram, Ottawa; W. J. Griffis, Port Arthur; John Dower, Windsor; J. Bramm, Kitchener; W. T. Shaw, New Toronto.
President, Exhibitors' Association—
Gordon McEachern, Toronto.

The Use of School Buildings for Recreation

The National Recreation Association (U.S.A.) has published the results of a 1950 study of school recreation centres operation in 105 communities located in 32 states. The findings of the inquiry are published in a report, "The Use of School Buildings for Recreation". Only the following communities were studied: 1. where school recreation centres are administered by a separate recreation department or agency; 2. where a community recreation programme is conducted the year round under a recreation executive; and 3. where better-than-average co-operation between school and recreation authorities was reported by field workers of the association.

Some of the findings are as follows: school authorities make available to the recreation department all types of indoor facilities—gymnasiums, auditoriums, and attendant services—suitable for recreation programmes. In a few cities facilities would be made available for more recreation departments if they had the needed personnel —weekday evenings and weekdays after school are the most popular times for recreation use. Boards of education make facilities available with as few limitations as possible, the only restriction most frequently reported is the "no smoking" rule. More than one half of the school authorities share in the cost of recreation programmes; about one fourth contribute funds to the recreation department or carry a recreation item in the budget; one fourth of the departments are not required to make any payment for the use of school buildings, while others meet the cost of custodial service, pay a rental fee, or carry other use charges. Board of education requirements as to the numbers or kinds of personnel to be employed in schools used for recreation are few and reasonable. The factors which contribute most to co-operation are a mutual desire to co-operate, an understanding of common objectives, and an effort to cultivate good personal relations.

The material for the report was assembled and summarized by H. Clifton Hutchins of the planning staff, National Recreation Association, 315 Fourth Avenue, New York 10.

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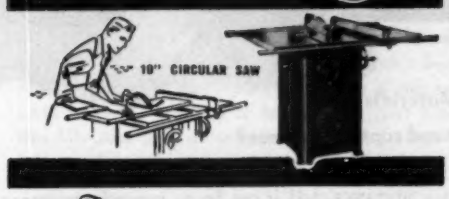

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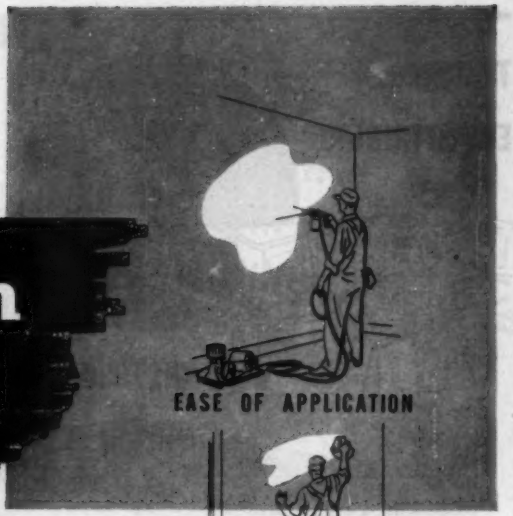

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THE SPOTLIGHT . . . . . .

The Increase in Canada's School Population

According to a recent forecast by the Dominion Bureau of Statistics, the enrolment in Canadian schools (with the exception of the province of Quebec) will have risen to 2,027,900 by 1955. The estimated increase between 1948 and 1955 is 430,894.

Most of the increase is confined to the elementary grades I-VIII. Secondary enrolment is shown as declining to 1951-52 and, although an upswing follows, the enrolment in 1954-55 is not expected to be as great as it was in 1946-47. Consequently, the major problems of class-rooms, equipment, teacher supply, and finance, will occur at the elementary level.

In Grades I-VIII the estimated percentage increases of 1954-55 enrolments over those of 1949-50 in nine provinces are:

	%		%
Newfoundland	29	Ontario	29
Prince Edward Island	23	Manitoba	20
Nova Scotia	25	Saskatchewan	5
New Brunswick	25	Alberta	23
		British Columbia	47

It will be noted that the least change is expected in Saskatchewan and the greatest proportionate increase in British Columbia.

Qualifications set up for Secretary-Treasurers

According to regulations set up by the Department of Education Larger School Unit Act, secretary-treasurers in Saskatchewan will, in future, be required to hold certificate of qualifications. Examinations will be held each year April 20-21 at superintendency centres and the following examination subjects must be passed before a Class B certificate is issued: Accounting, Secretarial duties, Administration and Business Law. The examinations may be taken by any British subject or Canadian citizen with at least Grade XI education and six months' experience in a unit office or related school administration work. A Class A certificate will be issued to persons having two years successful experience as a unit secretary-treasurer in addition to the Class B qualifications.

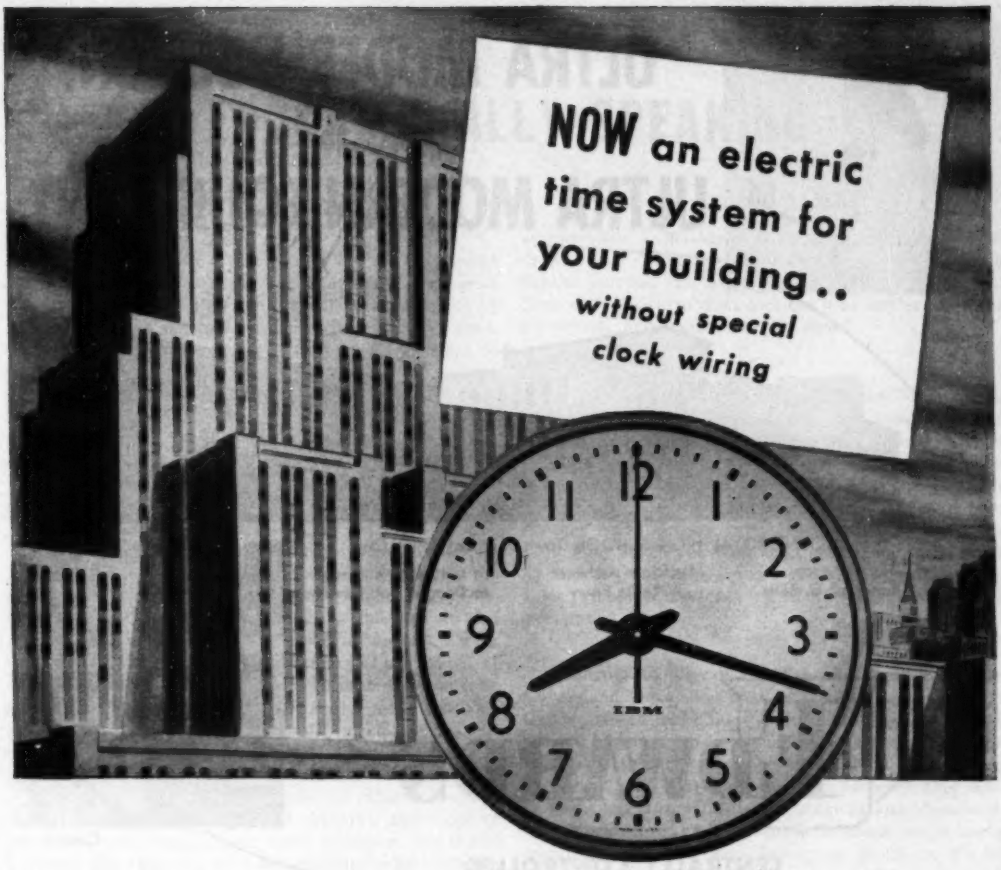
Similar recommendations are part of the recent Hope Report of the Ontario Royal Commission on Education which suggests training in courses pertinent to the duties of school business administrators for the school system of the province of Ontario.

5,000,000 *Friendships Formed by Mail*

In 1926, just 25 years ago, Dr. Sven V. Knudsen, a Dane, announced in an American magazine that four hundred Europeans wanted to make friends by mail in the United States.

In 1951, on the twenty-fifth anniversary of the pen-friends' movement, it is estimated that 5,000,000 young people between the ages of fifteen and twenty-one, living in all parts of the world, have been introduced to each other through letters. Last year, they sent 44,000,000 letters through the mail.

Dr. Knudsen has meanwhile extended his own mailing list to include 26,000 schools and institutions throughout the world.



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EDUCATIONALLY SPEAKING

A World Calendar at Last?

During the first two weeks of April, The Trades and Labour Congress of Canada, The Canadian Congress of Labour and the Canadian and Catholic Confederation of Labour, together representing more than 83.5 per cent. of Canadian organized labour, asked the Government to take steps to advance the adoption of The World Calendar.

The new calendar plan has also been endorsed by such bodies as the Canadian Manufacturer's Association, the Canadian Retail Federation and various local Chambers of Commerce and Boards of Trade, while the Canadian railways have signified that the plan is acceptable to them.

Just what is The World Calendar?

Briefly, it is a reformed calendar, promoted since 1930 by The World Calendar Association, an international organization with an active Canadian branch. While retaining the 12-month structure of the calendar we use now, the proposed one is designed to do away with the irregularities which are an acknowledged source of trouble and expense to businessmen and governments, and to every individual. According to the World Calendar Association 79.9 per cent. of North American firms, recently surveyed, reported that calendar irregularities caused difficulties and expense in their businesses.

Many of the earlier plans for calendar reforms involved radical departures from the old calendar, and most of them have now dropped from sight. However, The World Calendar has been approved internationally by business, scientific and professional organizations, and by churchmen of almost all faiths. Its adoption was on the provisional agenda of the U.N. General Assembly in 1949 and, while discussion was postponed then because of a crowded agenda, it is known to be widely supported by U.N. member nations.

* * * *

The World Calendar Association points out that the proposed calendar retains the structure of our present calendar, but is uniform from year to year. Its principles are simple, and it may be written down from memory in a few moments. Every date falls always on the same day of the week, even in leap years, and the four quarters are identical in all respects. The first month of each quarter has 31 days, the other two months 30 days each, while each quarter starts on a Sunday and ends on a Saturday. Every month in the year has the same number of working days.

* * * *

The Association explains that the complications in our present calendar stem mainly from the fact that a year of 52 weeks occupies only 364 days, while the calendar must accommodate a 365-day year in ordinary years and 366 days in leap years. It is these extra days which keep the date in constant revolution through the days of the week. Deal with the extra days, and the year settles down into an orderly arrangement of 52 weeks.

* * * *

The World Calendar takes care of the 365th day by removing it from the regular system of numbered dates, placing it between December 30 and January 1, and calling it Worldsday—proposed as a world holiday which would probably be accepted by employers and employees as a holiday in place of New Year's Day. In leap years, another extra holiday called Leapyear Day is inserted after June 30. While these days correspond to December 31 and June 31 they are not given weekday names and their presence does not affect the regularity of the calendar.

* * * *

According to The World Calendar Association, employers and employees are all troubled by calendar irregularities, which make the calculation of payrolls, periodic reports and comparisons, and holidays enormously complicated. At present, most holidays fall on different days each year, and when they occur in midweek they are a frequent cause of industrial shutdowns and absenteeism The introduction of The World Calendar would see all major Canadian holidays falling on Mondays, Fridays or on weekends, and most holidays would thus be part of a long week-end.

Some recognized medium for the exchange of knowledge and information needs to be established if international co-operation in education is to be successful. Recent statistical reports by UNESCO show the need for up-to-date and comparable information. The Report on the Inter-American Seminar on Illiteracy and Adult Education pointed out that the statistics of the various countries had to be used; in the majority of cases these could not produce comparable data.

Educational terminology is another great problem in the same question. The same word may denote different types of institutions in different countries, regardless of language. The terms "college" and "public school" are good examples.

* * * *

There is a degree of culture where national hatred vanishes altogether and where one stands to a certain extent above nations and feels the weal or woe of a neighboring people as if it had happened to one's own. —Johann von Goethe.

WHY UNIVERSAL EDUCATION HAS FAILED!

By ROBERT MAYNARD HUTCHINS*

EVERY ambition, at least every formal, material, institutional ambition, of the reformers, philanthropists, and optimists of the nineteenth century has now been achieved. They wanted to end slavery, lengthen life, raise the standard of living, establish universal free education, and create one world. Science and technology were to be the principal instruments by which happiness and prosperity were to be forged. Science and technology have performed nobly. But the optimism is gone.

Now we question whether legal slavery is the only slavery there is, whether a longer life is necessarily a good thing if that life is aimless, whether improvement in the material conditions of existence can solve the fundamental problems of existence, whether one bad world may not be worse than many, and whether science and technology can give us the wisdom to use the power they have brought us for the benefit rather than the destruction of mankind. We question particularly whether universal compulsory free education is, as we always supposed it was, a sufficient method of dealing with all the issues raised by freeing the slaves, giving everybody the vote, and developing industrialism. Aldous Huxley could say a year or two ago, "But in actual historical fact, the spread of free compulsory education, and, along with it, the cheapening and acceleration of the older methods of printing, have almost everywhere been followed by an increase in the power of ruling oligarchies at the expense of the masses."

This proposition, if true, is certainly one of the most sensational paradoxes in human history. Its sensational nature appears in the fact that it was totally unforeseen. For two hundred years proposals to broaden the suffrage have uniformly been accompanied by proposals to broaden education. Huxley finds that as they have got education their political power has diminished.

Arnold Toynbee finds a second explanation for the failure of universal education in the unforeseen rise of what are called the media of mass communication. He says, "The bread of universal education is no sooner cast upon the waters of social life than a shoal of sharks rises from the depths and devours the children's bread before the philanthropists' eyes. In the educational history of England, for example, the dates speak for themselves. Universal compulsory gratuitous education was inaugurated in this country in A.D. 1870; the Yellow Press was invented some twenty years later—as soon as the first generation of children from the national schools came into the labour market and acquired some purchasing power—by a stroke of irresponsible genius which had divined that the educational philanthropists' labour of love could be made to yield the newspaper king a royal profit."

His conclusion is: "Thus in countries where the system of Universal Education has been introduced, the people are in danger of falling under an intellectual tyranny of one kind or another, whether it be exercised by private capitalists or public authorities."

Mr. Toynbee has a remedy to propose. He says that the only course open to us in the fight against intellectual tyranny is "To raise the level of mass-cultivation to a degree at which the minds of the children who are put through the educational mill are rendered immune against at least the grosser forms of either private or public propaganda."

Mr. Toynbee's remedy is singularly like that offered by Victor Ratner, vice-president of the Columbia Broadcasting System, who says, "Radio is made in the image of the American people. To lambaste it is itself un-American. The critics hit at it because they claim to be shocked at what the United States' people are. Radio fits the people. The masses like comic books, Betty Grable, broad comedy, simple drama—it's vulgar; fast; simple; fundamental. Critics of radio often speak about the people's fare; yet they seem to refuse to face the facts about the people's taste. Such criticisms are really criticisms of the American educational system for not raising the cultural level of Americans; for not getting them interested in the better things when they are young. Radio then gets the blame for this failure."

The proposal here is to remake the public, to fend off the influences of the media of mass communication, by raising the level of mass cultivation through the system of universal compulsory education.

One of the most important ideas about education is compressed into the Platonic line: "What is honoured in a country will be cultivated there." This is true at the highest levels, in determining the course of research and advanced study. The interest in science and technology in the U.S. today must result from the honour in which scientists and technologists are held and from the high value that is set upon their work. It is even truer at the level of universal compulsory education, because the object of the system must be to make the children as far as possible what their parents or the ruling group in the community wants the next generation to be. This is what will be honoured in the country. It does not seem an exaggeration to say that *a system of universal free compulsory education, however expensive or prolonged, cannot do more than try to give the people what they want already. If the American people honoured wisdom and goodness as they now honour power and success, the system of universal free education would be quite different from what it is today.* But how can the system of universal free education, which is busily cultivating what the people now honour, teach them to honour something else.

The final answer to Mr. Toynbee and Mr. Ratner is that

*From Address to the Association of Canadian Advertisers, Toronto, June, 1951.

from the standpoint of time alone they have proposed an undue burden on the schools. A child is in school for only a small portion of his life, and even when he is of school age he is not protected, after hours, from the terrific storm of propaganda that now beats upon the citizen. The notion that the children can be inoculated against propaganda once and for all in childhood seems naive. It is hardly possible that this task can be accomplished for life in eight, twelve, or sixteen years.

Nevertheless, we must admit that Mr. Toynbee is on the right track, even if his track is not long enough to carry us to our destination. He suggests, in his talk of raising the level of mass cultivation, one reason why universal education has failed to achieve the intellectual, social, and political results expected of it and has, in fact, produced results exactly opposite to those that were confidently hoped for.

The reason, is *our confusion of education and schooling*. In the U.S. education can only be defined as what goes on in educational institutions. When we say that a man has had so and so much education, we mean he has had so and so many years in educational institutions. When we say we believe that everybody must be educated, we mean that everybody should go to school. This view found complete and depressing expression in the report of the President's Commission on Higher Education. The report takes the position that everybody should go to school and stay there as long as possible, and that it makes very little difference what he does there. The Commission concluded that if its recommendations were adopted they would suffice to make the United States strong, prosperous, and happy.

I do not think they would. I would go further and say that such strength, prosperity, and happiness as the United States now enjoys are not derived from its educational system. I would put it the other way round and say that only a country as strong and prosperous as the United States could survive the educational system that we have.

It is not enough to call for education for all. There are too many things that go by the name of education. We do not want education that leads us into the danger of an intellectual tyranny. We do not want education that is followed by an increase in the power of the ruling oligarchies at the expense of the masses. Education that offers the vain hope of preparing the student for a job, or perfecting him in the rules of etiquette, or filling his head with miscellaneous information, or adjusting him to his environment should not be called education at all. There is nothing in this type of education that would protect the masses against propaganda or enable them to appraise it.

One of the most hideous cultural manifestations in America is the picture we see annually of infants attired in caps and gown "graduating" from kindergarten.

This is a reflection of the notion that education is completed stage by stage, until finally, at graduation from the last unit through which the student passes, it is completed altogether. The same notion is at work in the credit system, which allows the student to get so many ineradicable points toward graduation on completion of a single course of lectures that may occupy one fourth of his time for ten weeks. Thus it is possible to say of an American college student that he is one-twelfth or even one-forty-eighth educated because he has a certain number of credits toward a degree.

The departmental system has a similar effect. A student is educated by "taking" courses. These courses are accumulated to his account. When the educational book-keeping shows that he has enough, with the proper minimum arithmetical average, he is pronounced an educated man. But each credit is regarderd, not only as interchangeable with every other credit, so that a student who fails in the Care of the Teeth may make it up by taking the History of China, but every credit is distinct from every other, so that a student in a course in history would be properly resentful if he were deprived of his credit in that course because he could not write English.

Education, then, is limited to educational institutions and is a matter of the time spent in such institutions and the points marked up to the student's credit on the books of account. These points are determined by the number of hours per week spent in the class room. If a student takes a two-hour course in any subject he is half as educated as if he takes a four-hour course in that or any other subject. This is true if the four-hour course is tap-dancing, poultry-raising, or salesmanship and the two-hour course is Greek, mathematics, or metaphysics.

The abolition of the American system of educational book-keeping and the substitution for it of an examination system is a simple matter. The system of examinations can easily be made to overcome the compartmentalization of knowledge and to require the student to bring to bear all that he knows and to regard all knowledge as one. The difficult thing is to formulate an educational programme that will assist the pupil to think and to think for himself; to judge and to give him some standard of judgment. But even this is not as difficult, in America, at least, as to change the attitude of the public, and this is decisive of the fate of universal education.

Any true educational program is likely to be hard work, both for students and teachers. As Aristotle said, learning is accompanied by pain. In a child-centered society like America, an educational program that is painful to children is unlikely to command the allegiance of the public. The popularity of Progressive Education must be ascribed in large part to this: the children have a "good time" in school. I think it fair to say that at this moment there is absolutely no activity that would seem incongruous in an American school, college or university.

In the first place, any true educational programme is likely to be hard work, both for students and teachers. As Aristotle said, learning is accompanied by pain. In a child-centered society like America, an educational programme that is painful to children is unlikely to command the allegiance of the public. The popularity of Progressive Education must be ascribed in large part to this: the children have a "good time" in school.

In the second place, most of what the public expects of the educational system it is not entitled to expect. I think it fair to say that at his moment there is absolutely no activity that would seem incongruous in an American school, college, or university. It is difficult to discern any purpose in the American educational system except the purpose of keeping young people off the labour market.

This purpose the system achieves; but it is not a very good one. Unless young people are going to do something in the educational system that is valuable to them and to society, it would be better to have them on the labour market than off it.

What would it mean to raise the level of mass cultivation through the schools? It would mean that pupils would learn to read and write, that they would acquire some standards of judgment, and that they would learn to think for themselves. Standards of judgment can only be acquired by familiarity with the best models. These models also supply the subjects important to think about; and the discussion of them should suggest the methods by which one learns to think about them. And reading and discussing the best models under the best teachers up to the time of leaving school, although it would be valuable, would not accomplish Mr. Toynbee's purpose. We can hardly suppose that a powerful dose of education in childhood will immunize the pupil against the propaganda that will assail him the rest of his life.

Nor can we suppose it is possible in childhood to develop standards of judgment in all fields. The pupil can get some notion of what is good in music, art, and literature. He can learn to use his head in mathematics and logic. But in any field of knowledge or action that requires experience he cannot do more than get the seeds of judgment. Morals and politics, two subjects in which it is vital for every human being, and especially every democratic citizen, to have some measure of good and bad, are without much significance for boys and girls. These subjects, if they are studied in youth and never studied again, remain a set of bare rules or instances without significance in the later life of the student.

Universal education must fail if it is not education. It must fail if it attempts to teach immature pupils what they could understand only if they were mature. *Since these are the most important subjects, the subjects that give us some idea what to do with ourselves and with society, universal education fails at the most important points if it stops at 15 or 16 or 22.* Literature, history, moral and political philosophy, economics and the other social sciences do not yield up their secrets to those who have had no experience in society.

A republic can maintain justice, peace, freedom, and order only by the exercise of intelligence. When we talk about the consent of the governed we mean, that every act of assent on the part of the governed is a product of learning. So Montesquieu said that whereas the principle of a monarchy was honour, and the principle of a tyranny was fear, the principle of a republic was education.

In the political republic of today we must see to it that young people go to school and college, not to get an education once and for all, but to begin the education which, as citizens of the political republic and the republic of learning, they should pursue for the rest of their lives.

I suggest that:

1. All men are capable of learning.
2. Learning does not stop as long as a man lives, or a man atrophies in those powers where learning is not going on.
3. Freedom is nasty, brutish, and short if it is attempted without provision for the free, unlimited acquisition of knowledge.
4. Truth is not long retained in human affairs without continual learning and re-learning.
5. Man is a rational political animal; his politics are tyrannical if they are not rational.

The republic of learning requires a common language, a common stock of ideas, and a common tradition. Specialism, vocationalism, and the elective system have broken up the community once formed by the common schools. This is the reason why the great triumphs of science and technology have been accompanied by a loss of understanding. We have discovered that it is possible to know more and more and understand less and less. The loss of community and the loss of understanding have left us helpless in the face of events.

The means to the ennoblement of life is the exercise of the highest powers of men, which can be carried on in the republic of learning. *The hopes the nineteenth century had of universal education will be fulfilled only when every man is a citizen of the republic of learning all his life long.*

Universal education must fail if it is not education. It must fail if it attempts to teach immature pupils what they could understand only if they were mature. Since these are the most important subjects, the subjects that give us some idea what to do with ourselves and with society, universal education fails at the most important points if it stops at 15 or 16 or 22. Literature, history, moral and political philosophy, economics and the other social sciences do not yield up their secrets to those who have had no experience in society.

HOW MUCH SHOULD PUPILS KNOW

At the end of the Elemental School stage?

THE Educational Research Committee of the London Head Teachers' Association has produced a memorandum setting out the attainments in the basic subjects which, in their opinion, the "average" child going on to a modern secondary school might be expected to possess at the end of a primary (elementary) school course. The committee comprised some 20 heads of primary and secondary schools.

As in the London County Council area some 40 per cent of children pass to grammar and central schools, the "average" modern school entrant was taken to be the child who stood at No. 70 in a list of 100. It was assumed that his intelligence quotient would generally be between 85 and 100.

Arithmetic

In arithmetic, it was considered he should have an accurate and ready knowledge of the multiplication tables up to 12 times, be able to work simple sums involving the four rules with numbers up to 200 and money up to £5, and be familiar with the use and relationship of (a) inches, feet, yards, and miles; (b) ounces, pounds, hundredweights, and tons; (c) pints, quarts, and gallons; (d) seconds, minutes, and hours; (e) days, weeks, and years. He should be able to tell the time and have a knowledge of the calendar, use a simple ready reckoner and table book, have an elementary understanding of speed as an integration of time and distance, be able to name simple geometrical shapes and distinguish a right angle, and have a knowledge of such simple fractions as are involved in the use of money and measurement with a ruler.

English

His reading age (Watts' Test) should be 9 plus. He should be able to express himself simply in oral and written English, show some knowledge of simple sentence construction, spell simple words within his own experience, possibly to the standard demanded by a spelling age (Schonell's Test) of 8 plus, read for pleasure and information, and read, understand, and answer simple questions on a simple factual passage. He should have some acquaintance with literature, including memorization, and have had scope to express himself through dramatization.

History

In history he should have some knowledge of significant personalities in British and world history, have begun to develop a lively curiosity about the past and present, and have acquired a reasonable pictorial background and a rudimentary sense of time sequence with a few important dates.

Geography

In geography he should know something of the world's peoples in the regions they inhabit, be able to read, and possibly make, a sketch map of his school and its immediate surroundings, understand simple geographical terms in common use, be familiar with atlas and globe, understand the cause of night and day and have some knowledge of the characteristics of the seasons, and have a more detailed knowledge of the British Isles. It is emphasized that he should have become interested in the world and its peoples.

Nature Study

Under the heading of nature study his knowledge should comprise the conditions required by plants, animals, and human beings to keep them in good health and help them grow, something of the growth of seeds and plants — studied in classroom and garden—the chief parts of flowers and plants and their functions, something about the sun, moon, and stars, erosion and the work of rain, wind, and frost, rocks and fossils. He should also be able to recognize some common British animals, birds, and insects, and have had practical experience of watching and caring for pets. The most important thing, adds the memorandum, is that his sense of interest and wonder should be aroused.

Music

In music interest is again rated most highly; the child should have derived immediate pleasure from his experiences and have begun to develop a love of music and some discrimination. He should have a wide repertoire of national and folk tunes, and be able to sing in a pleasing open voice some easy classical melodies and a few simple modern songs. He may have been introduced to part-singing through very simple descants and canons. He should preferably have had experience in playing a musical instrument, and should, through first-hand experience, additional to radio and gramophone, have listened to the best orchestral, instrumental, and vocal music, and made contact with ballet and opera.

He should have had training in pitch and rhythm, be able to tackle the scale in *sol fa* with the normal leaps that occur in simple music, be acquainted with the values of minims, crotchets, and quavers, know the time signatures 2/4, 3/4, 4/4 and their associated rhythms, and possibly the key-signatures of the major keys of C, G, and F. He should have had some aural training, and be able to appreciate with the eye the shape of a simple musical phrase in print,

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From a report on a Memorandum prepared by The Educational Research Committee of The London (Eng.) Head Teachers' Association and presented in the June 15th issue of The London Times Educational Supplement.

to re-create with fair accuracy the shape in sound, and to create musical phrases for his own pleasure.

Art

The committee declines to suggest a standard of attainment in art. The child should have had opportunities and experiences to enable him to develop his creative abilities as fully as possible, in many types of media freely used. The development of any special abilities should be left till later. His endeavours should have brought a beginning of appreciation of beauty, natural and created, and confidence and pleasure in execution. He should have felt the benefit of his art experience throughout all his school work.

Crafts

Similarly, the effect of the craft work should permeate the curriculum. The child should have learnt to respect tools and materials, and have developed skill, confidence, and pleasure in their use. He should have learnt to use his skill to express and nurture his creative desires, have developed a habit of thinking through and completing successfully a job in line with his ability, and have acquired some appreciation of good quality in tools, materials, workmanship, and design.

* * * *

Religious knowledge and physical education were not discussed by the committee, the work in these subjects being prescribed in the official syllabuses.

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Finally, the committee concludes that the child should have acquired definite attitudes towards school work, a keen desire to continue his education, a friendly attitude towards adults, an ability to mix with his fellows, and a respect for other people's opinion and property.

The Role of the School Principal on the GUIDANCE PROGRAMME

From: The Nova Scotia Guidance News Letter

IF a survey were to be taken of school principals for the purpose of discovering their conception of the meaning and the implication of guidance, two clearly defined concepts would likely emerge.

On the one hand there would be those who contend that education is guidance and that good teachers have always "done guidance". On the other, there would be those who maintain that guidance is a very specialized function and thus should be confined to specialists.

Lest we fail to see the forest for the trees and neglect to recognize the need for everyone's working to accomplish the same aims by mutual effort, then the two points of view should be recognized: Education can be good only when it is permeated with a guidance viewpoint but education and guidance should not be considered identical.

There are the aims, objectives, methods, techniques and skills outlined in the Course of Study, all leading to the final standard by which the success of the school and the teachers is judged — the Common Examining Board exams. By and large, emphasis is placed on the subject matter and in the preparation of the student to pass these tests.

Again, there are the aims, objectives, methods, techniques and attitudes of the guidance specialist, placing emphasis on individual differences and asserting that, before you can teach well, besides knowing your subject matter thoroughly, you must know your student thoroughly as an individual.

If education is to be permeated with a guidance viewpoint, everyone in the school has a part to play. Among these, the principal's role is both important and imperative. "As the Administrator, so is the guidance programme". The administrator makes the difference between a vital guidance programme and one which ekes out a drab unproductive existence. Determination of guidance policy naturally falls upon him. His vision, encouragement and faith are necessary attributes in the successful development of an effective guidance programme.

The following are considered to fall under his care:

1. To provide an enlightened and co-operative teaching staff.
2. To hold teacher loads down.
3. To encourage continuous revision of the curriculum.
4. To make school adjustments possible for the individual child.
5. To arrange school schedules so that every pupil may have an opportunity for counselling services.
6. To recognize that time allotted counsellors is not "free period" time, to be encroached upon by having them sit in or take over classes of teachers who are ill, or study sessions, or library periods.
7. To arrange in-service training of staff members.
8. To provide for continuous evaluation of the guidance programme.
9. To integrate the guidance programme with the overall school policies and plans.
10. To make provision for group guidance.
11. To be familiar with the principles, methods and techniques of guidance.

Without the active interest and sympathetic support of the principal, little or no value might result from the services offered by the guidance programme in the school; the same trial-and-error methods which presently characterize the choice of careers will continue to exist; pupil adjustment, both in and out of school, will be unsatisfactory, and their usefulness to themselves and society thereby impaired.

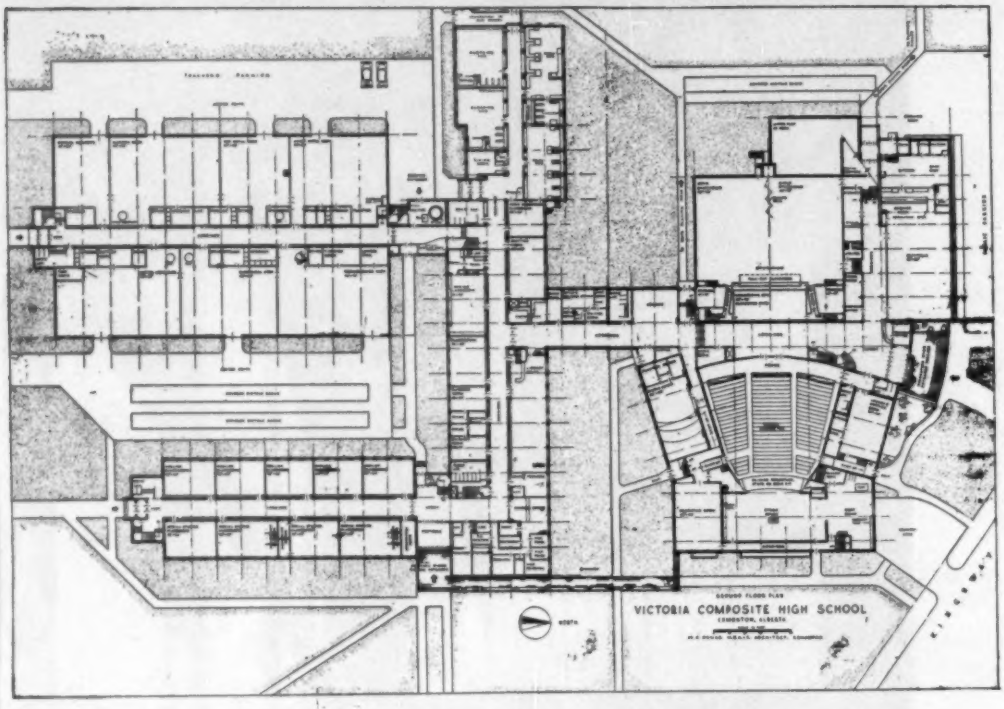
"As the Administrator, so is the Guidance Programme."

VICTORIA COMPOSITE HIGH SCHOOL

Edmonton, Alberta

EAST ENTRANCE—Photos by Ranson—Courtesy, Dewar, Stevens & Stanley, Architects.

VICTORIA COMPOSITE HIGH SCHOOL, EDMONTON, ALBERTA



R. S. SHEPPARD, SUPERINTENDENT OF SCHOOLS, EDMONTON, ALBERTA

IN 1942, the Edmonton Public School Board decided to erect a composite high school. The Superintendent, R. S. Sheppard, visited several cities in the United States and Eastern Canada to secure the latest ideas for a composite high school. His suggestions were given to the Architect, Mr. Max Dewar, who put them in blueprint form. These were submitted to the Board in 1944. After several revisions, as a result of consultations with members of the teaching staff, community organizations, etc., the plans were accepted. Tenders were called and construction commenced in the fall of 1946. The building will be completed by September, 1951.

Ten years ago the School Board felt that a composite high school which would provide an opportunity for the high school pupils to secure in one building, courses in Academic, Technical and Commercial work, should be erected. It was realized that only a small percentage of pupils who attend high school ever attend University and that provision should be made whereby those who do not enter the professions would have a training for the work in which they will be engaged in later life. It was realized that the former Technical School was entirely out of date and not equipped to render the service desired. The Board felt that by having a composite high school, the pupils would have an opportunity of selecting those courses in which they were particularly interested and which would be of the most value to them in preparing them for their work after leaving school.

The school is organized so that pupils desiring to enter the professions, the fine arts, the technical or vocational field, may secure the necessary training.

Those taking the technical course are allowed certain credit on their apprenticeship training. Those taking the commercial work may enter directly into the business field, while those taking the academic course may enter University or some higher centre of learning. The Arts and Crafts course, as specified by the Department of Education, includes Ceramics. The school has a well equipped Ceramics Department.

There are four large shops in the Technical section—Woodwork, Electricity, Automotives and Metals. These are all well equipped with up-to-date machinery. Each of these includes Drafting.

In the Home Economics department courses are offered in Fabrics and Dress, and Home Making. These each include Design. The facilities in this centre are very modern.

During the first six months of 1951, Apprenticeship Classes in Steamfitting, Plumbing and Sheet Metal were

operated in the school by Canadian Vocational Training.

The auditorium is considered one of the best in Canada. (See page 35 of Mr. Dewar's report.) The auditorium, with the adjoining Music and Dramatics rooms, provides the pupils not only of the school, but throughout the community with a fine opportunity for cultural development. The gymnasium and swimming pool, see pages 37 and 36 of Mr. Dewar's report, enable the pupils to secure a wonderful training in Physical Education.

Provision has been made in the building for an up-to-date cafeteria. This space is at present being used by the administrative staff of the Edmonton Public School Board. It is hoped that in the near future an administrative office will be erected by the Board and the cafeteria space will be freed for the purpose for which it was built.

The Evening Classes which are held at this school are proving very popular. During the past year approximately 1,000 adults were in attendance. Indications are that the number will increase considerably in succeeding years. Courses are given in Basic English, Grade XII Academic subjects and Commercial work, Technical work, Leathercraft, Photography, Investments, Ceramics, Blue Print Reading, Steel Square, Framework and other courses allied to the above.

The auditorium, gymnasium and swimming pool are used in the evenings to a great extent by the general public. As there is a lack of these facilities in Edmonton the demand for their use has been and will doubtless continue to be very great.

It might be interesting to note that the School Board is planning to erect two more composite high Schools to meet the demands of the increased high school enrolment. Several new elementary and elementary-junior high schools are being erected in various parts of the city. These schools are modern in every respect.

MAXWELL C. DEWAR—DEWAR, STEVENSON & STANLEY, ARCHITECTS, EDMONTON

EDUCATIONAL facilities—like education itself—should always be ahead of the times, since they prepare boys and girls for tomorrow.

In its recently-opened Victoria Composite High School, Edmonton has an institution whose doors of learning open onto tomorrow by providing facilities carefully planned to serve into the future.

Planning of the school started in 1944, when Maxwell C. Dewar, then Edmonton's City Architect, set about gathering all the ideas and information possible from a wide range of resource centers. Schools throughout Canada and the United States were visited, leading educational authorities were consulted, and countless meetings were held locally with teachers and specialists in all branches of the planning programme. Considerable credit for architectural work must go to Doris Tanner, who has been associated with Mr. Dewar throughout the whole project.

The plan of the building was dictated by several important considerations:

1. The desire to limit height to two storeys, to eliminate fatigue in climbing.

2. The obvious separation of the curriculum functions into:

   (a) technical or vocational training.
   (b) commercial subjects such as typing, shorthand, etc.
   (c) language, English, social studies.
   (d) science laboratories and lecture rooms.
   (e) home economics subjects.
   (f) recreational facilities.
   (g) administration and student offices.

3. The need to minimize circulation routing to avoid time loss between classroom changing, to express an intimate relationship between all functions, and to create an environment for education.

4. The desire to use the recreational facilities, in particular, by the public at large after teaching hours, and therefore to shut them off from the rest of the school.

5. The simultaneous use of various functions for various uses, viz., night school, gymnasium, swimming pool, rifle range, auditorium, public meeting rooms, etc.

6. The exterior was to express the functions of the interior.

Engineering Considerations

In planning the school, the engineering aspects of the structure had to fulfill certain requirements, the most important of which were:

(a) Choice of materials to withstand hard usage associated with schools, and yet meet economical standards.

(b) Flexibility in classroom size, to meet changing curriculum requirements.

(c) A heating and ventilating system sufficiently flexible to meet changing room size and provide optimum health standards.

(d) A programme sound system of broadcast studio quality to be an educational asset, and to function as a class change announcer and as telephone communication system.

All these requirements have been adequately met.

Construction

Foundations are poured concrete and spread footings.

Main slab is reinforced concrete over service tunnels and unexcavated areas.

Frame is structural steel columns and beams, with steel joists for second floors and roofs.

Exterior walls are brick and tile, faced with special pre-cast terrazzo 3" thick, giving a clean-cut modern treatment in large panels. The terrazzo panels include zonolite concrete backing for insulation and lightness.

Interior walls on corridors, stairways and permanent locations, are glazed brick dado, tile and light weight plaster over.

Classroom partitions are staggered wood studs, plastered.

Floors are concrete fill over structural slabs, with lino in classrooms, rubber tile in laboratories, asphalt tile in

TYPICAL CLASSROOM

other locations, and terrazzo in corridors and lavatories and on stairways.

The roof is pitch and gravel over zonolite concrete fill for insulation, flashed with copper.

Sound conditioning is acoustic zonolite plaster in classrooms, and perforated tile in corridors, swimming pool, and auditorium.

Fenestration involves wood sash in wood frames with double glazing in classrooms, stainless steel in entrances, and solar glass in the south windows of the home economics department.

Light coloured glazed tile was used in all corridors to the height of the recessed lockers, and in stairways, swimming pool, gymnasium and other areas subject to severe use.

Gang shower rooms and drying areas were completely covered with ceramic tile on walls, ceilings and floors.

For flexibility of planning and changing use, an eight foot module was adopted, which proved economical in materials and column spacing.

Equipment

Heating and Ventilating: To meet the severe requirements of this module in the heating and ventilating system, Carrier Weathermaster Model 36E combined heating and ventilating units were employed at each window, on eight foot centres. Exhaust outlets were placed on corridor walls at corresponding centres. Primary air, cleaned, humidified and heated to about 70 degrees F. is distributed from any of six zone air conditioning units to the weathermasters at the rate of 15 c.f.m. per pupil. Two pipe steam heating is employed in the window units to heat air to required temperature under control of thermostatic valves. Four gas-fired boilers complete the system.

As primary air passes over the coils in the Weathermaster, venturi action draws additional air from the room for re-circulation. Tempered air is therefore delivered where it should be—at the window sills, while a corresponding quantity of air is exhausted every eight feet at the corridor walls.

Electrical: A 2,300 volt primary service to three 150 K.V.A. transformers serves general school purposes, with a 2,300 volt line to the stage transformer room. Emergency lighting is from automatic battery standby.

Recessed incandescent Curtis lighting units are used in corridors, Day-brite Vix-Aid commercial fluorescent in all classrooms, special lighting effects in auditorium, and combined mercury vapour and incandescent units in the gymnasium.

Plumbing: Special acid-proof iron piping is used in laboratories, copper water services throughout with recirculation hot water.

BIOLOGY LABORATORY

Enclosed type sand filters (Francis-Hankin Co.) for swimming pool. Wash fountains used in technical shops.

Sound: The sound system installed by Dominion Sound Equipment includes a central control room, two channel and master operating console unit installed with Magnecorder PT6-J tape recorder, three-speed record player, and integrated classroom change signal system.

The Building As A Whole

Victoria Composite High School is located at the southwest juncture of 101 street and Kingsway, on the 22.5 acre site of the old Victoria School.

Construction of the new institution was started in June, 1946, and first units went into operation in September, 1949. Parts of the recreational wing were put into use early in 1951, and others are being used as they are completed. The swimming pool will probably be in use when this article appears. Final units of the home economics wing, now under construction, are expected to be ready for classes this fall.

To meet the educational considerations, the school consists of a main building and four major wings radiating from it. It is generally two storeys in height, and consists of more than 200,000 square feet of floor space.

Linked to the old Victoria School with a passageway, the new structure has a present school population of approximately 1,200, while the old building houses 500.

The new institution is so planned that each wing serves a major curriculum function. Particular emphasis was placed on the planning of the recreational wing so it could be shut off from the rest of the school and used by the public after school hours and at other non-teaching periods.

Such wing design has many advantages; each wing has a special use, and can be closed off from remaining parts of the building, to be used separately. Shops for night school, and the recreational wing are examples.

The wing plan also makes possible extension of any one use. It make it possible to give all classrooms east and west exposures, other rooms constant north light, and makes possible service entry for all wings.

The wing plan also makes for most efficient circulation of student population, and reflects both inwardly and outwardly an interesting environment for education.

The main section of the school comprises administration offices, students union offices, library, guidance rooms, science labs., art rooms, and some classrooms.

It is, of course, normal to provide laboratory instruction as a practical aid to classroom lectures. But at Victoria Composite, laboratories reach the ultimate in modern practicality.

The three science laboratories—on the second floor—

are laid out in suites. Each suite consists of a large lab, a stepped-floor lecture room, and a store room between. Thus, storage space is accessible to both rooms which need equipment; it is simple for students to pass from lecture room to laboratory; and because of the stepped-floor design, all students can see demonstrations by the teacher.

The chemistry lab. has sinks for each table, and fume cabinets for experiments producing noxious odours. Design provides for four pupils at each table, with double gas jets at each end.

In the physics lab., pupils work two to a table, while the biology lab. is so equipped that it can be used as a chemistry lab. if necessary.

All the suites are provided with rubber tile on the floors and acoustic tile on the ceilings.

But the final touch! Planning has placed the chemistry and physic labs. on the north side, where it is cool with a constant north light, and the biology lab. on the south side so there is more sun for plant experiments.

The technical wing houses shops, including woodworking, electrical, motor mechanics, sheet metal, hot metals, machine shop, and special projects. The shop was designed on the principle of the modern assembly and industrial plant, with a central core housing permanent rooms such as offices, stores, washrooms, etc. On each side of the central core, space is divided into various shop units, and partitions can be moved to suit the need for any shop area. All shops have outside doors opening onto service driveways.

Student washrooms are included as part of each shop, in order that the instructor may have complete washroom supervision at all times. Wash fountains are used throughout, in line with practice in industry, and they have already proven highly satisfactory.

Shop machines are serviced with electricity from an overhead bus duct, to achieve complete flexibility in location of machinery.

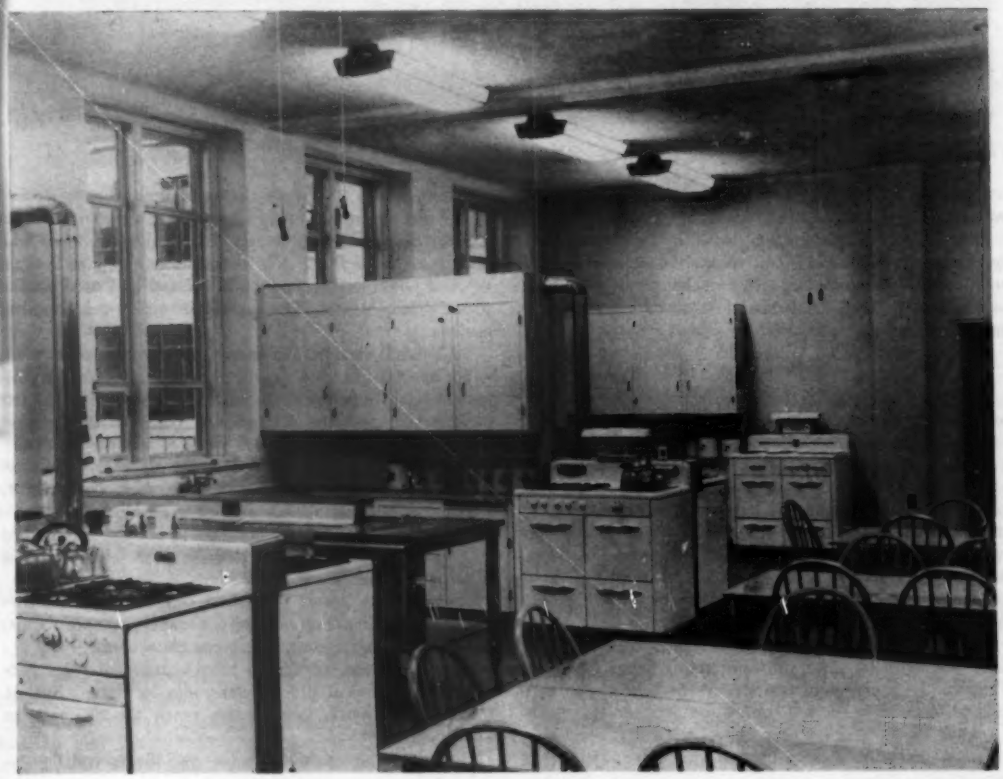
A second floor over the central core houses drafting rooms and visual education rooms for vocational trades.

The school's southeast wing is used entirely for language, English, and social study classrooms, and comprises 18 individual classrooms and large study rooms. In some cases, special integrated study areas are included in the classrooms.

All classroom doors are recessed 30" from the corridors for student safety; students running along the hall can't bump into suddenly-opened doors.

Desks are movable for flexibility of arrangement, and marboleum floors make for quietness and high light re-

HOME ECONOMICS LAB.



flection. Acoustic tile on most ceilings, and acoustic plaster on others, obviates the necessity for straining teacher's or student's voices, and make it possible for those in back seats to hear with the same ease as those in front seats.

Even without the double-glazed banks of windows (the bottom quarter of which opens inward on bottom hinges), the fluorescent fixtures provide all-round lighting of 30 foot candles.

Blackboards and tackboards in classrooms vary in size according to the needs of the subject taught—as do the cupboards on side walls.

Social study classrooms have conference alcoves at the rear, and all rooms are equipped with clock, public address system, and telephone inter-communication.

Individual, recessed lockers for students are located in outside corridors, handy to "home" classrooms. The lockers are raised six inches off the floor, in line with modern locker practice.

The home economics wing, when completed, will house two food laboratories, laundry, two clothing laboratories, design room, and special home furnishing room. The very latest in equipment will be provided.

In the connecting corridor between the main unit and the recreational wing are housed the photography rooms, with their own developing and enlarging rooms, a medical suite, and two classrooms for handicraft work.

The recreation wing has its own main entrance onto Kingsway, with a floodlit concrete surfaced parking lot adjacent. The wing houses the 758-seat auditorium, a 200-seat cafeteria, the luxurious swimming pool, gymnasium and other ancillary rooms.

The dazzling foyer has been treated unusually, to set it apart as one of Edmonton's smartest. Interior brick walls, a winding terrazzo staircase with terrazzo flower box at its foot, wall wash lights, are topped by an amorphous shaped fluorescent fixture in the centre of the ceiling, surrounded by a large amorphous shape of acoustic tile. Final touch is the fixture's rose hue spread over the ceiling, effectively setting off the wall washes.

Everything for complete student education in stage craft and drama presentations has been provided in the auditorium and its adjuncts. From the sloping floor and the latest in theatre chairs, to the spacious stage and the most modern lighting and stage equipment, nothing has been spared.

Side walls of the auditorium slope in toward the stage so that an intimate atmosphere is maintained and there is little division between audience and performers.

Planning of the auditorium was the result of extensive

THE AUDITORIUM

THE GYMNASIUM

research in seating arrangements, lighting, acoustics, scene shifting, and multi-purpose stage presentation.

To achieve good sight lines, aisle slopes were permitted to go to a maximum of one foot in five, which is in line with recommendations in new, modern building codes.

Acoustic qualities were carefully analyzed with the resulting reverberation times (at 512 cycles):

empty	**1.55 seconds**
250 persons	**1.28 seconds**
500 persons	**1.1 seconds**
758 persons	**1.0 seconds**

Special lighting was installed, including wall washes, ceiling washes, cove lighting, wide beam down lights, and narrow beam down lights for aisle lighting.

All these, with the exception of the cove lights, are controlled by dimmer switches, in order that fading and mixing of lighting can be used to create the proper mood in the house.

Built in with the cove lights are two ceiling light bridges for front and forestage lighting. Six 2,000 watt Lakolites are installed in one bridge, with provision for six more in the other bridge. These are also on the dimmer circuits. Both stage lighting and auditorium lighting are controlled by a lighting mixer with 27 autostat dimmers and three masters. Total connected load is 130 K.W. Stage lighting includes borders, spots, cyclorama floods, and floor pockets.

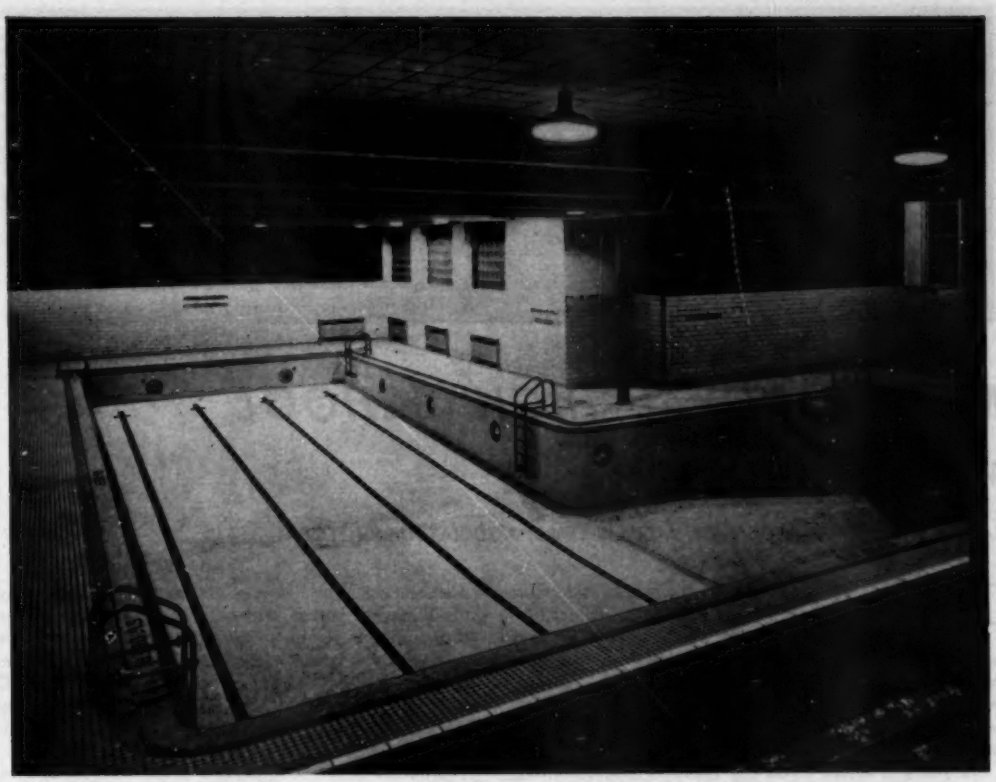
The stage itself is large enough for any production. Its proscenium opening is 36′ wide, 18′ high, and the stage proper is 30′ in depth and 65′ in width, not counting the large work area opening off the stage on the same level. The fly loft, which extends 45′ above the stage floor, was decided upon after careful consideration of the relative merits of horizontal and fly loft methods of handling scenery and drapes. Its roof is gridded with 4″ channels to support necessary pulleys, etc., for any kind of stage equipment which may later be desired.

The back wall of the stage is finished in smooth plaster painted light blue to serve as a cyclorama.

Opening off the stage is a complete workshop area with scene docks, paint frames, cupboards, sink and storage areas, and stage manager's office. Below stage are dressing rooms, costume and makeup rooms, property storage rooms, musicians' rooms, electrical and general storage rooms.

A separate stage paging system is installed, which permits paging and cue directions from stage director's lookout to all dressing rooms, musicians' rooms, pin rail master, sound control room, and projection room.

All stage curtains are fireproofed with Flamort, and



THE SWIMMING POOL

a counterbalanced asbestos fire curtain automatically drops down its steel smoke pocket track at the stage front if fusible links holding it up are melted by a stage fire, effectively sealing stage from auditorium.

The orchestra pit has been designed so that different effects can be arranged: 1. a full stage floor, covering the orchestra pit; 2. open pit; 3. or a set of steps across the orchestra pit; 4. or any combination over any part of the pit. This is achieved by means of sections of fore-stage which roll along channels and which are moved up to stage level and thence out of the way by means of an hydraulic piano hoist at the stage front, operating between orchestra pit and stage levels.

The piano hoist was planned as insurance against the crushed legs which many high school students suffer when moving heavy pianos, but has also been pressed into service to achieve the desired flexibility in stage surface.

The back of the auditorium and portions of the sides are covered with acoustic tile, while the remaining walls are brick. Roof is metal lath and concrete.

Anemostats in the ceiling serve as both inlets and exhausts for ventilation.

A fireproof projection room is also provided in the auditorium, with an adjoining observation room.

A notable feature of the auditorium is the large lounge area opening off the foyer, which can be used as a meeting room or classroom but which for performance serves as lounge area for auditorium patrons. It is equipped with a small kitchenette so that tea can be served during intermissions, if so desired. This is in line with practice in many repertory theatres.

Adequate checking room is also provided.

Adjoining the stage, and accessible from it, is the dramatics room, or green room, for classroom teaching of theatre arts. It will also serve as chorus rehearsal room or assembly room for performances.

Close to the auditorium is a tiered music room, completely soundproofed, with individual practice rooms adjoining.

Gymnasium

The gymnasium, focal point of the school's health programme, has an unobstructed floor space 68' x 96', flanked on one side by a permanent bleacher section seating 450 spectators. Pull-out bleachers at floor levels provide for an additional 80.

Faced with the necessity of operating both boys' and girls' physical education programmes simultaneously in the gym, planners called for complete separation of the gymnasium into two self-contained units. This is done by a Richards-Wilcox Folder-Way, electrically-operated door extending from floor level up to the steel truss and

(Continued on page 42)

MOUNT ROYAL HIGH SCHOOL

Mount Royal, Quebec

RANDOLPH C. BETTS, ARCHITECT, A LESLIE PERRY, ASSOCIATE ARCHITECT

THE citizens of Mount Royal, Quebec, in suburban Montreal, refer to their fine new high school as, "the most modern high school in Canada," and with good reason. The school is a very fine building and contains the most modern facilities for teaching the complete secondary school programme, vocational as well as academic, and also provides full accommodation for community activities.

Six years of effort in careful planning and designing on the part of the school board and architect went into Mount Royal's impressive new school, with the aim of providing the best possible secondary school for the community. The schools of Mount Royal are under the general supervision of the Montreal Protestant Central School Board and the immediate direction of a local Protestant School Board of Mount Royal. Members of the present board are H. F. Finnemore, Chairman, J. J. H. Miller, John F. Close, Mrs. R. R. Buchanan and Ralph C. Flitton. Mr. Miller acted as chairman of the local board's building committee with Mr. Finnemore and Mr. Flitton as members; Mr. Flitton representing the Montreal Central Board, being chairman of the building committee of the central board.

The architect is Randolph C. Betts, a member of the firm of Lawson & Betts, Architects, Montreal. He was aided from the beginning by Mr. A. Leslie Perry, supervising architect of the Montreal Protestant Central School Board.

The school, although not yet completed, was opened to one thousand students on September 1, 1950. The official dedication took place on February 28, 1951.

In designing and planning this fine school, the architect followed carefully, requirements set forth by the local school board and also the Montreal Protestant Central School Board This demanded the careful choice of the equipment and expert advice on all phases of the work was obtained from outstanding engineers.

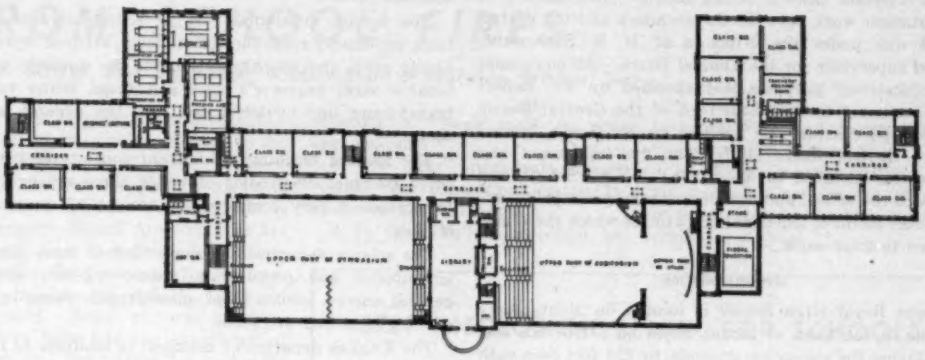
The heating is by a forced hot water system fired by three Waterous boilers with a capacity of 22,820 gross feet of radiation for the heating of the building, and one small boiler for generation of domestic hot water. The boilers are fired by oil burners designed to burn Grade C Bunker Oil, supplied by two 8,000-gallon fuel storage tanks. Individual thermostatic controls are installed in each room.

Ventilation of the main portion of the building is by a series of electric roof fans which continually clear used air from the corridors and classrooms. Large public rooms such as the theatre and gymnasiums and all washrooms are air conditioned. Lighting, designing by a competent lighting engineer, consists of fluorescent fixtures in all classrooms and corridors giving a minimum of 25 foot candles on all work areas.

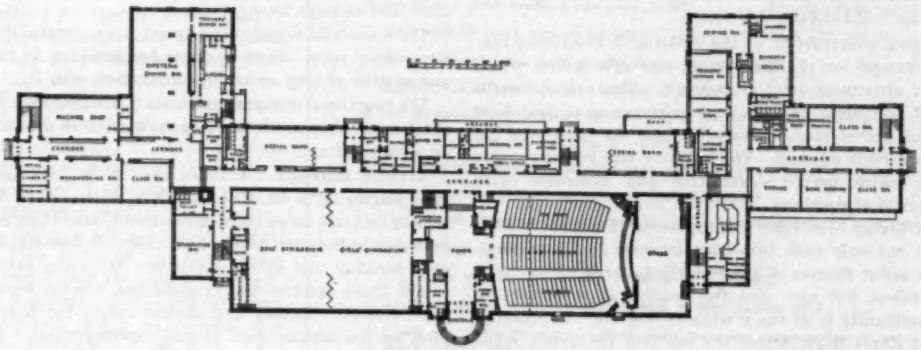
Particular study was given to the auditorium and stage lighting. David C. Orrick, local specialist on stage equipment, together with Charles Rittenhouse, stage expert for the Montreal Protestant School Board, visited New York to obtain the latest information available with the result that the Mount Royal High School has one of the best equipped stages in the Montreal area, suitable not only for school work but for almost any type of theatrical production the community may require.

The communication system of the school also received special consideration with the result that one of the most complete and efficient systems of any recent Canadian schools has been installed. All important rooms, including classrooms, have direct telephone communication with the principal's office There is an exceptionally good public address system incorporated into the auditorium and gymnasium. These special features, combined with fire alarm systems and other types of emergency alarms, represent the latest thought in the field of school communication.

The choice and installation of equipment was handled



FIRST FLOOR



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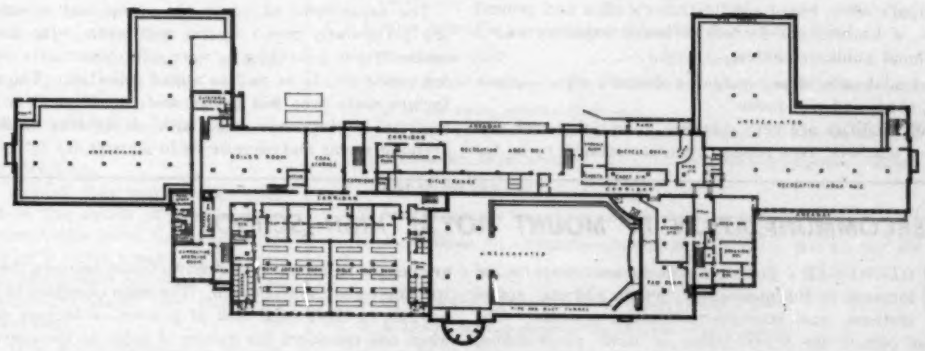

BASEMENT

through the Department of New Buildings of the Montreal Protestant Central School Board. Co-ordination of construction work between the architect and the central board was under the direction of D. B. Sutherland, special supervisor for the Central Board. All equipment for educational purposes was specified by Mr. Robert Guild, assisted by Mr. Crawford of the Central Board, and the purchasing was handled by Mr. Leslie Inwood of the Central Board staff. The fine equipment and accessories installed in Mount Royal High School, and in which the school and community take great pride, are the direct result of the time and patience which these men devoted to their work.

Accommodation

Mount Royal High School is located on Montgomery Avenue in the town of Mount Royal on a site 926 feet long, facing the recreation grounds, by 231 feet deep with a total area of 214,000 square feet. The building is 546 feet long overall by 112 feet deep at the central portion. Wings at each end are 63 feet wide with the building at its greatest depth 185 feet. The total cubic content of the building is 2,145,648 cubic feet.

General construction of the building is reinforced concrete except for the auditorium and gymnasium which are of structural steel framework. The exterior walls are of buff brick and the roof is known as a dead level tar and gravel roof. Areocrete slabs are used over the portions built of steel. The building has two expansion joints which permit contraction and expansion with changes in atmosphere.

The highly diversified requirements of a modern high school not only take into consideration the importance of the latest feaures of the educational programme to be undertaken, but also give full consideration to serving the community in as many ways as possible. In planning Mount Royal High School the building committee made a special study of community needs in order that the school might be as valuable as possible to the citzens of the town of Mount Royal.

The administration centre of the school contains a fine principal's office, board administrator's office and general offices, a board room for school board meetings and a vocational guidance centre.

Medical health offices include a doctor's office, nurse's office, clinic and rest rooms.

Staff facilities are very complete, comprising men and women teachers' rest rooms, general common room for both men and women teachers and auxiliary women teachers' rooms.

The service department of the school includes cafeteria and dining room for 125 students, kitchen, teachers' dining room and accommodation for the complete maintenance staff, engineer's office and shops, boiler rooms, transformer and switch rooms and ten general washrooms.

The general teaching department consists of twenty-three standard classrooms of which three are equipped to provide a very complete department of commercial studies.

The science department is comprised of three distinct laboratories and preparation rooms, together with a general science lecture room, photographic room, optical studies room and art room.

The English department includes, in addition to regular classrooms, a fine central library and various offices together with a visual education room seating 80 students.

Music instruction is facilitated by a band and music room and two sound proof practice rooms, together with office and storage room.

The household science department has a general domestic science room where general homemaking is taught and smaller sewing rooms in conjunction with it.

The vocational department boasts a woodworking room, sheet metal shop and a drafting room with all the various necessary offices.

Athletic interests are taken care of in two distinct gymnasiums 52' x 72', separated by a sliding wall. When opened into one large room this physical education centre provides badminton courts and adequate basketball, indoor baseball and other activities. With the partition closed, there are two fine gymnasiums, one for boys and one for girls. Locker and shower rooms for boys and girls are an integral part of this accommodation.

The cadet department contains storage rooms and offices and a fine rifle range.

Besides these regular facilities there are two large recreation areas and a standard handball court.

The department of which the school and community are particularly proud is the auditorium with its fine central foyer providing a wonderful community centre for public events as well as school activities. The auditorium seats over 960 people and the stage is a fully equipped professional stage with all lighting facilities, dressing rooms and accessories to go with it.

INTERCOMMUNICATION IN MOUNT ROYAL HIGH SCHOOL

NOTEWORTHY in recent school construction is the increase in the number of "public address" sound systems, and intercommunication systems. The former permit the transmission of radio programmes, records, speeches or messages to all classrooms or certain selected ones, by means of loudspeakers, controlled from a central point.

Loudspeaker systems have many useful functions but are not too satisfactory for conversation between the central point and the classroom. The main objection to their use lies in their total lack of privacy—a serious defect when one considers the nature of some of the conversations between principal and teacher. In addition, many teachers deeply resent a loudspeaker system which allows monitoring their classroom without their knowledge.

(Continued on page 46)

The Care and Protection of Children

FROM SCHOOL FIRES

JOHN DOWER, Asst. Bis. Admin., Windsor Board of Education, Windsor, Ont.

OUR responsibility as administrators in using due care in the protection of school children from fire is generally recognized, but more than mere recognition is necessary. School fires occur at the rate of more than five a day in Canada and the United States, destroying millions of dollars worth of property. Some of you administrators have had the experience of large and destructive fire outbreaks while all of us have had minor fires in school buildings or on school properties.

Every school business official should be vitally interested in the subject of this discussion and should know that any programme of fire preveniton and fire protection, should include organization, administration, and rules and regulations and the full understanding of the programme by all parties concerned therein.

Therefore, I am going to reverse the procedure used in most papers. I am going to ask *you* the questions.

1. How many of you have had a fire loss within the last five years?

2. Business administrators with new schools being built—what fire prevention precautions have been included in specifications?

3. Were fires in older buildings or new buildings?

4. Do you rely on school principals for fire drills—have you ever blocked off one exit during such a drill?

5. Is not cleanliness in schools, storage spaces, work rooms, etc., one of the best fire preventatives—one of those prevention ideas that are far better than cures? This is under your direction.

6. Are all your maintenance staff alert to the causes of fires and do they recognize seven out of ten fires could be possibly avoided if common sense and proper handling of materials and ordinary care had been carried out.

7. How many memoranda on fire prevention methods have your maintenance men and employees received during the past year dealing with supervisory preventative methods or pointing out weak spots in your organization.

8. Are school principals having regular fire prevention lessons included in the curriculum?

9. Is there full co-operation between the Fire Department and your maintenance department?

10. What recommendations can you make to increase the efficiency of fire prevention methods now generally in use?

SELF INSPECTION BLANK FOR SCHOOLS

Date .....

Name of School ..... City .....

Capacity of School ..... Number now enrolled .....

1. Are all exit doors equipped with panic locks? ..... Are these locks tested each week to insure ease of operation? ..... Do these lock securely so that additional locks, bolts or chains are not necessary? ..... Are such additional locks open whenever building is in use? .....
2. Are all outside fire escapes free from obstructions and in good working order? ..... Are they used for fire drills? .....
3. Is all heating equipment, including flues, pipes and steam lines:
   (a) in good serviceable condition and well maintained? .....
   (b) properly insulated and separated from all combustible material by a safe distance? .....
4. Is coal pile inspected periodically for evidence of heating? .....
5. Are ashes placed in metal containers used for that purpose only? .....
6. Check any of the following locations where there are accumulations of waste paper, rubbish, old furniture, stage scenery, etc., and explain under remarks: attic, basement, furnace room, stage, dressing rooms in connection with stage, other locations. .....
7. Is the space beneath stairs free from accumulations or storage of any material? .....
8. What material or preparation is used for cleaning or polishing floors? ..... Quantity on hand? ..... Where stored? .....
9. Are approved metal cans, with self-closing covers or lids, used for the storage of all oily waste, polishing cloths, etc? .....
10. Are approved metal containers with vapor-tight covers used for all kerosene, gasoline, etc., on the premises? ..... Why are such hazardous materials kept on the premises? .....
11. Are only approved extension or portable electric cords used? .....
12. Are sufficient fire extinguishers provided on each floor so that not over 100 feet travel is required to reach the nearest unit? .....
13. Have chemical extinguishers been recharged within a year? ..... Is date of recharge shown on tag attached to extinguishers? .....
14. Is building equipped with standpipe and hose having nozzle attached? ..... Is hose in good serviceable condition? .....

Completed by .....

Fire prevention in the school itself should begin with the architect. It should include provision for maximum fire-proof construction throughout the building; installation of automatic alarms, sprinkler systems and fire extinguishers; provision of adequate exits; installation of a safe heating system with fire proof furnace rooms and flues; installation of correct wiring and insulation of electrical systems; and the location of the school plant with respect to a non-hazardous surrounding environment.

I asked an architect if he would jot down a few important points on fire resistant construction.

1. Suitably positioned stair wells for the orderly and rapid evacuation of personnel from every part of the school.

2. Stairs to be of fireproof materials and enclosed in a safety well with smoke and draft barrier doors at each floor line.

3. Stairs to lead to a direct outdoor exit at grade level.

4. All stairs equipped with hand rails and sufficient distance between hand rails for passage of two persons (i.e. not over 5' 0" between rails).

5. Stair treads to be of non-slip materials particularly stair nosings.

6. Stairs should be at right angles to corridors and not at the ends. Stair runs should be broken with landings to prevent long runs of stairs.

7. Adequate system of alarm signals and proper spacing of fire fighting apparatus such as extinguishers and fire hose.

8. All exit doors to be fully equipped with panic bolt hardware.

9. Paint and other inflammable stores to be kept in fire proof rooms protected by fusible link weighted door closers. Doors to bear underwriters' label.

10. Buildings to be protected with lightning rod equipment.

11. All under stair storage places to be properly lighted and lined with fireproof materials.

12. Decorative curtains as used in auditoriums, special rooms, etc., to be fire proof or anti-fire treated fabrics.

13. Direct connected fire alarm box to fire hall.

14. Class room doors should be recessed and not swing out into corridor traffic stream.

15. Safe heating system.

16. *Water Safety*—non-slip floors in shower rooms, non-slip materials around pools. Pools well lighted for under water observation. Proper depths and clearances for diving equipment used.

Electrical Equipment all of safety type, properly grounded, fused, panel fronts, etc. Locked safety guard partitions around main switches and meter boards.

Glass—either wired glass or duplate safety glass in all glazed doors.

Copies of the book—"Fire Prevention Education" should be in the hands of all school administrators. It may be obtained free from The King's Printer, Ottawa.

VICTORIA COMPOSITE HIGH SCHOOL, EDMONTON

(Continued from page 37)

wood roof, along the top of the steps up the permanent bleacher section. Each end of the gym has its own 360 degree speaker connected to the school's public address system, and its own incandescent and mercury vapour lighting, scientifically arranged for gymnasium needs. Boys and girls have separate entrances into the gym from their separate dressing rooms downstairs.

Beneath the gymnasium is probably the only swimming pool of its kind and appointment in Canada.

It is L-shaped, measuring 28' x 75' on the long leg, and 25' x 60' on the short leg. The long leg is used for swimming only, and has a maximum water depth of 5' 6". The short leg is the diving area, with a maximum depth of 11' for the one and three meter diving boards. Spacious non-slip tile walkways are provided around the entire pool, and modern under-water lighting is supplied by 19-500 watt underwater lights set in the walls.

Walls of the pool room are glazed brick to a height of 8', with cement plaster, covered with special plastic paint (Vitretex) on the upper walls and plastered portions of the ceiling. Most of the ceiling is covered with perforated acoustic tile.

Permanent bleachers to accommodate 200 spectators give a complete view of both diving and swimming portions of the pool.

Ample dressing room space, complete with gang showers in beautifully tiled rooms, ample washroom facilities, tote basket storage, bathing suit drying areas, team rooms, and supervisors' offices are available for both boys and girls, and both have direct and private access to pool and gymnasium.

In the girls' dressing rooms, both individual and gang showers have been supplied, and a special makeup room is set aside, complete with hair-drying equipment. The rose-tiled girls' shower rooms are regarded by many as probably the most beautiful rooms in the whole building —certainly as the loveliest examples of tile work in a structure where outstanding tile and terrazzo work prevails.

Included in the recreation wing is a modern, soundproof 25-yard rifle range, complete with gun room and meeting room.

The cafeteria, located on the main floor, is self-contained, with highly modernized serving area of stainless steel and ceramic tile, and a hardwood maple floor for dancing. Use of a large "Modernfold" door permits the serving area to be shut off from the cafeteria, allowing the room to be used for study groups, dances or other functions without interfering with the kitchen. Modernistic lighting is arranged so that special effects can be created for various events, and adequate checking facilities are adjacent to the cafeteria.

At different locations on the school grounds, bicycle storage racks are provided, with metal roof. Adjoining the shop wing are car parking areas complete with electrical plug-ins. Both bicycle and car parking areas are illuminated with flood lights.

Victoria Composite High School stands as a monument of vision and planning, and to those whose skilfull hands built it. It will provide, for long years, proof of the conviction that through education we can build better citizens, and through better citizens, a better world.

ANNUAL CONVENTION

ASSOCIATION OF SCHOOL BUSINESS OFFICIALS

Royal York Hotel, Toronto
October 15-18, inclusive

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Canadian Affiliate

Ontario Association of School Business Officials

President—Mr. J. M. McGrigor, Business Administrator, Board of Education, Galt, Ontario.

Secretary-Treasurer—Mr. Albert Hodgins, Deputy Business Administrator, Board of Education, Toronto.

At its Annual Convention in June last, the Ontario Association went on record as unanimously backing the Toronto Board of Education as host of the International Association, and offered the fullest co-operation of its executive and members in helping to make the convention an outstanding success.

Printed Programmes will be available in September

Canadian school executives and school board officials interested in this convention which is being held in Canada for the second time in its history, should write for further information and programme direct to Mr. C. H. R. Fuller, Business Administrator of the Toronto Board of Education, and Manager of the convention, at his office 155 College Street, Toronto.

Besides the full programme of addresses and discussions on a wide range of topics on school administration, led by experts in their fields, there will be special addresses by outstanding speakers, among whom will be the following:

Opening Address—Mr. Don Henshaw, MacLaren Advertising Company, Toronto.

Banquet Address—His Excellency, the Hon. Sir Alexander Clutterbuck, High Commissioner for the United Kingdom in Canada.

Educational Address—Dr. J. G. Althouse, Chief Director of Education for the Province of Ontario.

Scientific Lecture and Demonstration—Professor R. Bieselle, Jr., Chairman, Dept. of Electrical Engineering, Southern Methodist University, U.S.A.

The Ladies Committee of the Toronto Board of Education, led by Mrs. C. H. R. Fuller, has provided a wonderful programme of activities which will keep the visiting ladies busy for the entire convention.

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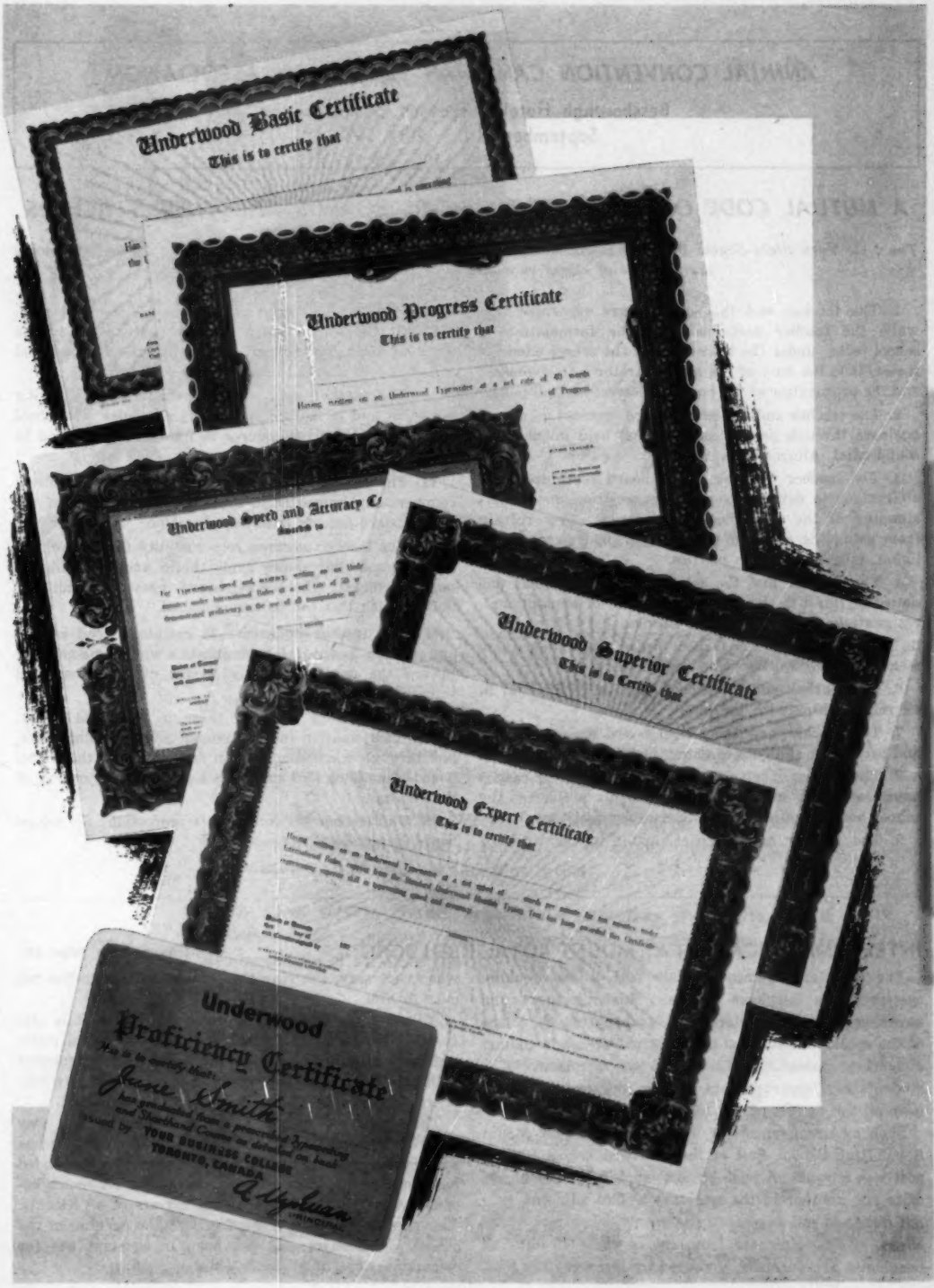
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ANNUAL CONVENTION CANADIAN EDUCATION ASSOCIATION

Bessborough Hotel, Saskatoon, Saskatchewan
September 18th to 20th, 1951

A MUTUAL CODE OF ETHICS FOR SCHOOL BOARDS AND THEIR TEACHERS

The New York State School Boards Association and the State Teachers Association have agreed upon the following mutual code of ethics as a means of developing good relations.

1. The teacher and the school board recognize that while the teacher participates in the formulation of school policy under the leadership of the school administrator, it is the duty of the administrator to recommend, and the prerogative of the board to determine final policy.

2. The teacher and the school board transact all official business through proper channels and hold inviolate all confidential information.

3. The teacher and the school board recognize their obligations to develop growing appreciation and understanding of the principles of democracy; they refrain from using the school to promote personal views on religion, race, or partisan politics.

4. The teacher and the school board agree that due notice in fair time be given in all cases of appointment, resignation, or termination of service.

5. The teacher and the school board avoid disparagement of fellow workers and predecessors.

6. The teacher and the school board are impartial in all relationships with the pupil.

7. The teacher and the school board encourage able and promising students to enter the teaching profession.

8. The teacher receives from the administrator candid appraisal of his work, and help with his problems; the school board requires such supervisory assistance.

9. The teacher actively participates in the work of local, state, and national professional educational associations; the school board actively participates in the work of township, county, district, state, and national school boards associations.

10. The teacher uses ethical procedures in securing positions, and in maintaining salary schedules; the school board uses ethical procedures in filling positions and in maintaining salary schedules.

11. The teacher accepts no compensation from firms commercially interested in the school; no member of the school board accepts such compensation.

12. The teacher assumes responsibility for the welfare of the pupil and shows sympathetic understanding of pupil problems; the school board provides conditions under which this can be accomplished.

13. The teacher endeavors to maintain good mental and physical health and to maintain a wholesome attitude toward the pupil; the school board provides healthful teaching environment.

14. The teacher develops through continued study, travel, participation in professional and community life, and through wholesome human relationships; the school board stimulates and encourages professional growth of the teacher.

15. The teacher is proud of his profession; the school board is proud of its teacher.

INTERCOMMUNICATION AT MOUNT ROYAL HIGH SCHOOL

(Continued from page 40)

The ideal arrangement utilizes both a loudspeaking system and a telephone system. Music, lectures, and messages of general interest are transmitted by means of the speakers, but when the principal wishes to contact a teacher immediately, he uses the telephone. The students are interrupted to a lesser degree and do not hear all the details of the conversation.

Such an arrangement is installed in the new Mount Royal High School, first of the Montreal School Board's post-war schools. A push-button panel in the principal's office and another in the secretary's office adjacent, permit either to call any of 45 classrooms, laboratories, and offices. Calls originated from any of these 45 outlying telephones are normally answered by the secretary who, when necessary, can ring the principal and turn the call over to him.

Although the necessity for it seldom arises, it is also possible, on occasion, to call and talk to several classrooms simultaneously, or to allow two outlying telephones to hold a conversation between themselves. No switchboard and no switchboard operator are required.

This telephone system is not connected in any way with the services of the Bell Telephone Company and as such is the property of the High School. The suspended handset type of telephone was chosen for all rooms because of its greater adaptability to users of all heights. This system went into operation with the opening of the school in February and has been in constant use for communications of all kinds since.

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DISCIPLINE IN THE CLASSROOM - A GUIDE FOR BEGINNING TEACHERS

1. Interested and busy children are seldom discipline problems. Most disciplinary cases arise from a pupil's boredom or feeling of being unappreciated.

2. If a discipline problem does arise, it is usually the teacher's responsibility to solve it himself. Only under exceptional circumstances does he send or take the offender to the principal's office.

.3 An effective teacher is usually friendly with his students but not "chummy." Pupils lose respect for the teacher who tries to put himself on their level.

4. A good teacher is usually a good housekeeper. Pupils also lose respect for a teacher who appears unable to keep his things in good order. Furthermore, if a teacher writes neatly on pupils' papers and on the blackboard, he is encouraging the important habit of neatness.

5. The wise young teacher realizes he should not stop learning merely because he has made a graceful exit from a school of education. Only by reading the latest in pedagogical books and magazines will he advance and mature in his teaching.

6. If the teacher is interested in the classwork, the pupils are usually interested. Interest, like enthusiasm and the measles, is contagious. Without interest, the pupil learns little.

7. A Textbook is meant to be an aid, not a dictator. "Textbook teachers" are still numerous, even in our so-called enlightened era. The good teacher uses many different materials that fit into his plans.

8. Talking too much is the commonest error in the teaching profession. The good teacher gets his pupils to talk and guides their discussion.

9. Homework is never done well unless it has first been thoroughly planned, honestly justified, and clearly explained. The teacher who shouts, "Pages 54 to 60 for tomorrow!" just as the dismissal bell begins to clang reaps a meager harvest of effective homework.

10. The average parents-in-distress who visit the teacher are highly co-operative but somewhat baffled. The good teacher deals frankly, patiently, and calmly with them. They will appreciate it, and their children's work will improve as a result.

11. Teaching promptness is largely a matter of example. The good teacher is habitually prompt.

12. The methodical return of corrected papers to the student enables him to discover his errors and estimate his progress — or lack of it. Some teachers never return pupils' papers; others return them only after such a lapse of time that the pupil has completely forgotten what the requirements of the job were. Students do not rate highly a teacher of either type.

13. The teacher who abandons his professional ideals, yet continues to teach, belongs elsewhere than in a school. The significant is achieved only through the possession of ideals.

14. Any teacher who fails to derive some degree of pleasure from working with boys and girls and observing their expanding personalites and knowledge, should hand in his resignation at once. A square peg doesn't fit a round hole.

15. The well-planned lesson has the best chance of success. Making lesson plans isn't always thrilling, but every serious human endeavour gains by careful planning.

16. A ready sense of humour is valuable. Pupils generally despise the solemn face, the sepulchral voice. They like to laugh with the teacher. But the good teacher returns quickly to the work at hand.

17. The wise teacher doesn't continually "talk shop" when away from school. To do so makes him appear shallow.

18. The wise teacher does not discuss with others any matters which common sense indicates are confidential. To do so is a sure way of running into trouble.

19. The teacher owes it to his pupils to keep physically fit and mentally alert. Only then can he do his best work.

20. Every good teacher posseses what is, to him at least, an acceptable philosophy of life, which enables him to achieve some degree of poise, tolerance, and serenity. The ship without a rudder seldom reaches port.

21. The intelligent teacher joins professional organizations—local, provincial and national. They are our shield. "United we stand; divided we fall."

22. The good teacher is usually consistent, not mercurial. Children like to know what to expect.

—From NEA Journal.

How Important is Intellectual Training

According to present day educational philosophy, we must educate the "whole man", physical and social, as well as intellectual, and some people, although admitting the importance of a balanced personality, are beginning to think that this three-fold objective of the schools is reacting to the disadvantage of intellectual training.

As a commentary on this score, the U.S. Engineers Council of Professional Development recently conducted an inquiry into "the most desirable personal characteristics" of members of their profession, with the following results:

After the prime importance of personal quality was agreed upon unanimously, the following characteristics were listed according to their importance:

(1) Intelligence is the most highly sought after personal quality in an engineering employee;
(2) Dependability is second only to intelligence;
(3) Organizational acceptability;
(4) Energy;
(5) Emotional acceptability.

Physical acceptability was considered to be the least important characteristic of all. The same order of rating was given by all groups queried by questionnaires—top engineering executives, engineering school administrators, university faculty members, personnel officers and even the students themselves. Could it be the educationists who have been depricating the importance of intellectual attainment in the schools?

* * * *

The Artist and the Schools

French school authorities have decided that the young generation must grow up in surroundings favourable to art appreciation. Following a recent government decision, part of the sum voted by the French parliament for the building of schools or universities will be used to commission works of painters, sculptors and engravers, who will thus be given an opportunity of showing their talent. (UNESCO).

* * * *

Art and Art Objects for Schools

The Hertfordshire Education Committee, England, believes in providing new schools with painting and art objects. This enterprising school authority spends ½% of the cost of new schools on murals and sculpture. For their new post-war Barclay secondary modern school the committee commissioned Henry Moore, well-known sculptor to do a bronze group which has now been erected at the school.

When purchasing new classroom seating and other school furniture, you can be sure of the finest and most modern equipment by selecting your requirements from catalogue F. 51.

This new edition has been widely distributed. Have you received a copy? If not, please write immediately to

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THE SCHOOL PROGRESS BOOK SHELF

The Fundamentals of Public School Administration, by Ward G. Reeder, Macmillan, $5.00.

This book discusses the urgent and recurring problems found in the administration of a local school system whether the system be rural or urban, small or large. It deals with those problems primarily from the point of view of the officials and employees who have the chief responsibility for administering the schools, namely, the superintendent and the board of education; it does not, however, neglect the administrative problems of other school employees such as principals and teachers. It is a manual of theory and practice; it emphasizes why and how in school administration.

The book is organized in seven parts as follows: Part I—Administrative Personnel and Organization; Part II—Administration of Instructional Employees; Part III—Administration of School Plant; Part IV—Administration of School Business Affairs; Part V—Administration of Pupil Personnel; Part VI—Administration of Instructional Materials and Part VIII—Special Phases of School Administration.

The writer suggests that this is a book that should be included in every school administration's special book shelf of reference and study material.

In Search of Food, by Dennis Clark—Longmans Green, $1.00.

In Search of Food is an enthralling little book which tells the story of man's search for food down through the ages, and the development of its preparation for eating. The author has traced his subject to its beginnings, and describes primeval hunters, the first fishermen, the cultivators and farmers; the makers of fire, and the first cooks.

Over and above this the book has a fine literary flavour, being a veritable anthology of quotations and extracts on the subject from the works of famous authors.

The writer recommends In Search of Food as a valuable addition to any school library both for its immediate subject and because it contains many points of interest with social studies, health, home economics and literature.

Let's Play Safe—Seiberling Rubber Co. of Canada Limited, Toronto, 10c.

A very attractive little booklet entitled, "Let's Play Safe" printed in full colour and designed for pre-school and primary grade children, has been received by School Progress. It has been published by the Seiberling Rubber Co. of Canada Limited, and may be obtained from any Seiberling dealer across the country.

Accidents to children are tragic, and the prime purpose of the booklet is to help teach safety. Believing that safety habits instilled before a boy or girl reaches public school age are important, this combination story and picture book is to meet this need on the part of parents. Teachers in the primary grades will, the writer feels sure, find this inexpensive booklet very useful in teaching practical safety against a play background.

Educational Publicity, Benjamin Fine—Musson Book Co., Leaside, Toronto, $5.00.

Almost everybody interested in education knows that Dr. Fine is the education editor of "The New York Times". It is not as well known, however, that during the past ten years he has taught and has conducted workshops in public relations and publicity in various colleges and universities including the New School for Social Research, New York University, University of Kansas City, and Yeshiva University.

In this book Dr. Fine draws heavily on his experience both as an editor and as a teacher with the result that he has written a highly informative and interesting work.

It is essentially a "how to do" book. Fourteen of its 25 chapters actually have that phrase in their headings—"how to write a publicity release"; "how to recognize educational news"; how to select your publicity staff"; "how to get your story printed"; "how to build good public relations with the press" are typical chapter headings.

Dr. Fine goes into great detail on the minutae of public relations and publicity practices. For example, he gives more than 250 synonyms for the word "said" and lists cliches to be avoided.

In telling what to do Dr. Fine devotes much space to what not to do. To the student and young practitioner these chapters, studded with horrible examples of poor releases which have crossed his desk, are of incalculable value.

Know the Game (Series) Lawn Tennis—Soccer Associates, 10 Overlook Terrace, New York 33—50c.

A new type of presentation in book form explaining the rules and principles of tennis is "Know The Game—Lawn Tennis". The colourful well-illustrated booklet, complete with diagrams and drawings explaining the rules, faults, fouls and questions and answers on the game, has recently been published for the Lawn Tennis Association of England.

The book, which sells for 50 cents in the United States, is obtainable from Soccer Associates, 10 Overlook Terrace, New York 33, N.Y.

Other books in the "Know The Game" visual series include Squash Racquets, Soccer Football, Rugby Football, Badminton, Swimming, Women's Hockey and Men's Field Hockey.

A special discount of 10 per cent is allowed for group purchases of six or more books of one title.

Invisible Mending published by Culver Products Company, 3630 Eastham Drive, Culver City 2, Calif.—$1.00.

This book reveals for the first time to the layman, the intricate but relatively easy art of reweaving materials.

Invisible Mending covers all the most common types of reweaving. Chapters are devoted to French weaving, material splicing, patch weaving, stoating and hosiery repair and the mending of knitted goods. Each chapter is profusely illustrated with simple line drawings for the reader to follow.

So the novice will not be discouraged, the authors have included several chapters on background information. Threads, yarns, materials and tools for reweaving are all discussed before entering the subject of actual reweaving. Many of those interested will doubtlessly regard this background information as "primer" reading, but the publishers obviously are trying to meet the demands of the amateur in the sewing arts.

Piping Pointer—1951 Edition—Free on request—Crane Limited, 1170 Beaver Hall Square, Montreal, Que.

Thirty-six pages of practical data and illustrations are contained in a remarkably comprehensive booklet just published under the title of "Piping Pointers".

"Piping Pointers" is certainly an indispensable reference guide for the trainee, and no doubt will also be appreciated as a refresher course for the old timer. It is stated that interested individuals or firms are welcome to quantities of these manuals for training purposes, apprenticeship classes, and distribution to plant design, operators and maintenance men.

The manual clearly yet simply outlines the following:—

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Accompanying the above information are 316 illustrations which will clarify points which may not be too clear to the beginner.

How To Run a Lathe—50th Edition—A. R. Williams Machinery Mfg. Co. Ltd., Toronto. Paper, 25c.; Fabrikoid cover, $1.00.

In 1907, one year after the establishment of the South Bend Lathe Works, the first edition of the book "How to Run a Lathe" was published. The original publication contained only a few pages and illustrations. Each successive issue grew in accordance with the increasing experience and know-how of the South Bend Lathe Works. For the past forty-four years the "How To Run a Lathe" book has been used as a source of reference for the skilled machinist and a textbook for students. There have been editions published in the French, Spanish, Chinese and Portuguese languages. The new 50th edition printed in English is a composit of 45 years of experience, countless hours of research, and valuable ideas and suggestions submitted by hundreds of experienced shop men.

The current edition is 8" x 5¼", has 128 pages and over 350 illustrations. There are eleven chapters clearly written in nontechnical language making it easy for the beginner to understand. The texts cover such items as the correct installation and levelling of the lathe, grinding cutter bits, turning, boring, thread cutting, taper turning, drilling, reaming, tapping, machinability ratings and cutting speeds for various kinds of steels; standard tolerances for press fits, running fits, push fits, and sliding fits; allowances for finish turning, filing, polishing, grinding, reaming, lapping and honing; and tooling dimensions for South Bend Lathes.

Edition 50 "How to Run a Lathe", is available in paper binding at 25c or in imitation leather fabrikoid binding at $1.00 a copy postpaid. Sample copies will be sent free of charge to Vocational Directors and Instructors. For quantity prices and sample copy write to A. R. Williams Machinery Mfg. Co. Ltd., 60 Front St. W., Toronto, Ont.

Martin Aptitude Testing Kit—Martin Publishing Co., 690 Market St., San Francisco 4, $10.00.

A new and improved edition of the Martin packaged aptitude testing program is now available to office managers to aid them in making the best use of their employees' abilities. This is believed to be the only completely packaged program which can be effectively used by the average office manager without consultation with high-priced specialists. It might well be useful in School Guidance Departments.

The aptitude program is the outgrowth of research conducted by Howard G. Martin, an industrial psychologist, during 1947 and 1948. Use of the tests showed that definite patterns of scores could be identified for various kinds of office jobs. Upon completion of these studies, the way was clear for the preparation and national distribution in 1949 of a complete aptitude program which would enable an office manager, unfamiliar with testing, to use tests effectively in placing office workers without the expense of consulting industrial psychologists.

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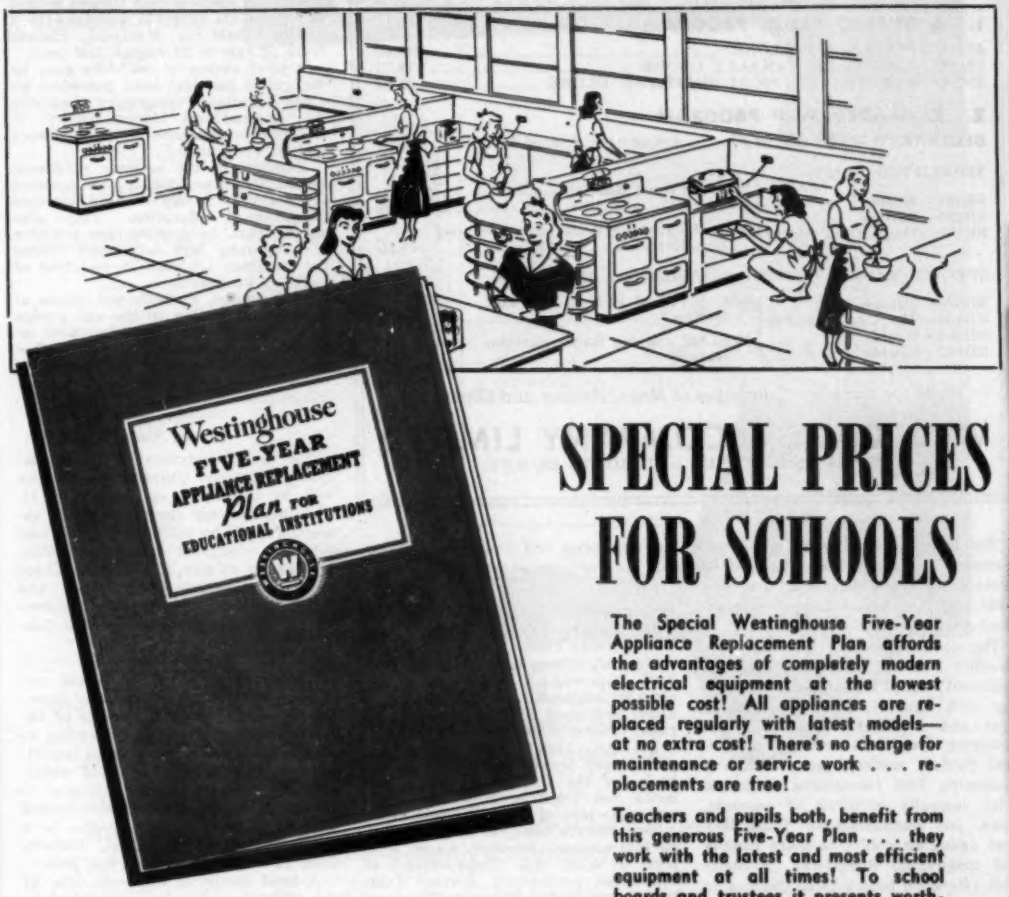

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The 1949 packaged program was announced in May of that year and its acceptance was widespread. The new edition of the kit is a further improvement over the 1949 program.

The aptitude testing kit includes a Number Facility Test (measuring the applicant's speed and accuracy in working with figures), a Name Checking Test (gauging speed and accuracy in general clerical duties), an Arithmetic Reasoning Test (measuring ability to think logically in terms of amounts, rates, and quantities), a Vocabulary Test (gauging ability to learn rapidly and understand directions), a Steno Test (standard letters to be dictated to the applicant, determining basic shorthand skill), a Typing Test (straight copying from standardized material), an Individual Record Chart (showing graphically the applicant's pattern of office aptitudes and skills), a Manual of Instructions, and a set of Scoring Stencils.

The person's suitability for various office duties is determined by comparing his pattern of abilities with standard patterns in the manual. These standard patterns represent minimum requirements for typical office positions. Sufficient materials are included in the testing kit for use with ten applicants and replacement materials are available at low cost.

Better History Textbooks—Unesco and Its Programme Series—University of Toronto Press.

Unesco's efforts to bring about textbook improvement and some results already achieved, are outlined in a newly published 30-page pamphlet entitled "Better History Textbooks".

In April, 1950, Unesco published a preliminary booklet entitled "A Handbook for the Improvement of Textbooks and Teaching Materials", indicating its plan of action in these fields. A few months later, in August, 1950, an International Seminar, whose main topic of study was "Improvement of Textbooks, particularly History Textbooks" was held in Brussels. The questions asked of the specialists at this meeting were clearly set out: "What are the best methods for the evaluation and improvement of textbooks, and how can the diffusion and effective use of history and other textbooks which contribute to international understanding be assured?"

The participants, who worked in four study groups, stressed the necessity for a critical revision of textbooks on an international scale, by means of mutual agreements between countries. They also indicated the advantages of introducing into school curricula the teaching of world history, the history of civilizations, as well as a course on the United Nations and its Specialized Agencies.

Geography Teaching For International Understanding—Unesco and Its Programme. University of Toronto Press.

Geography as a part of school curriculum does not only consist of learning about the physical aspects of the world in which we live. According to how it is taught, it can play an important role in creating a spirit of understanding between nations. It was to study this problem that Unesco invited 44 specialists from 23 countries to a seminar held in Montreal,, Canada from 12 July to 23 August last year.

A brief survey of the work done by the group has just been published by Unesco called "Geography Teaching for International Understanding" in the series of brochures entitled 'Unesco and Its Programme".

Members of the seminar reaffirmed in the first place that it was essential for everyone to-day to have a sound geographical education. They also agreed that, in general, the teaching of geography lags very much behind the progress achieved in the field of practical geography.

Programmes, methods and means of teaching, according to the age groups of the children for whom they were intended, were studied in detail. The seminar then discussed the training of teachers and their need for up-to-date information.

Unesco Notes

The fourth centenary of the foundation of National University of Mexico will be celebrated on September 11. The international character of the observance will be marked by a Mexican Scientific Congress and an exhibition of Mexican culture, in which the Union of Latin-American Universities and specialists from the various countries in the western hemisphere will take part.

* * * *

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A study of the movement for improving the quality of education by raising the school-leaving age has just been published by Unesco in the form of a 72-page booklet, "Raising the School-leaving Age", by Dr. I. L. Kandel, M.A. Ph. D., Litt.D., L.L.D., an international authority on the subject. The study forms part of a group planned by Unesco in an effort to clarify the problems of compulsory, free and universal schooling.

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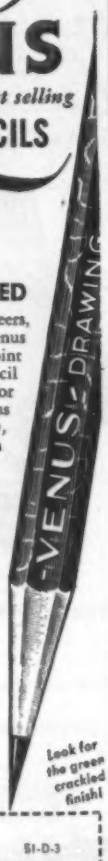

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The Cambridge Syllabus of Religious Teaching for Schools. New Edition. Macmillan. $1.20.

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Complete Course in Office Practice, Second Edition, by Allan E. Sparling. A revision of a standard Canadian text prepared expressly for use in commercial high schools. Gregg, $1.85.

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The Democracy Series, by Prudence Cutright and W. W. Charters. (Revised) Your Land and Mine. Grade III, $1.75; Toward Freedom. Grade IV, $1.80. Macmillan.

Deserted City, by F. King. For retarded readers. Action-type stories with a simple vocabulary. Grades 4-6. Ryerson, 25c.

E

An Educational Psychology of Learning, by J. W. Tilton. A broad educational picture of psychology in four parts. Macmillan, $3.50.

Enameling: Principles and Practice, by Kenneth F. Bates. A practical guide for the beginning student in the art of enameling on metal. Illustrated. Grades 10-13. World, $4.50.

English By Stages—Book III, by I. Morris. Comprises separate but co-ordinated language and reading books. Grades VII-VIII. Macmillan, 60c.

English Fundamentals—Form A, by D. W. Emery and John M. Kierzek. Canadian Edition. A practical student text-workbook of lessons and exercises in English. Grade X. Macmillan $1.50.

Essentials of Business Practice (Revised). An elementary textbook of business practice and recordkeeping for Grades 9 to 10. Pitman, $1.50.

Everyday Grooming, by Livingston & Maroni. For Home Economics Classes dealing with every phase of good grooming. Moyer, $3.30.

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Fifty Comprehension Tests, by W. S. Mackie. A selection of fifty extracts with questions for comprehension testing. Senior High School. Macmillan, 70c.

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Happy Living, by C. H. Gundry and R. E. Willets. The Grade III book in our New Canadian Health Series. Dent, $1.60.

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Poems of To-day — Fourth Series. Covers a selection of the best poems published in the decade of 1938-1947. Macmillan $1.75.

Practical Business Psychology, by Donald A. Laird & Eleanor Laird. A textbook for students of business. This book has as its theme the use of phychology as a help to making better employees and employers. Illustrated. Gregg. $5.25.

Preparation and Practice in Precis Writing, by James M. Charlton. One hundred and ten extracts varying widely in style and content. A model prexis accompanies each type. Senior High School. Macmillan, $1.20.

Principles and Practices of the Guidance Programme, by Glenn E. Smith. Concerned with the how, the why and what of guidance services. Macmillan, $3.25.

Projects in General Metal Work, by M. J. Ruley. A manual giving detailed directions accompanied by full page blue print of 35 different projects easily made in any metal shop. Moyer, $2.40.

Prose and Poetry for Canadians, by Dr. J. Chalmers and Dr. H. Coutts. Journeys (Grade VII), $2.00; Adventures (Grade VIII), $2.15; Enjoyment (Grade IX), $2.25; Landmarks, Teacher's guidebook for all three books, $1.65. Dent.

The Pupils' Own Vocabulary Spellers. Revised Edition by Gates, Rinsland Sartorius and Peardon. Combined Text Edition: Book I, Grades II and III, 95c.; Book II, Grades IV, V and VI, $1.25. Macmillan.

Q

The Question Time Series, by Ethel M. Phillips. New titles in this supplementary reading series. Grades I-II. Macmillan, each 10c.

R

Reference Manual for Stenographers & Typists, by Gavin & Hutchinson. A handbook for transcription students and a desk reference book for working stenographers. Gregg, $1.15.

River of Silver, by J. Grace. For retarded readers. Action-type stories with a simple vocabulary. Grades 4-6. Ryerson, 25c.

Rockets, Missiles and Space Travel, by Willy Ley. Revised in the light of latest findings. Many new photographs and drawings. Macmillan, $6.50.

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S

Something New in Model Boat Building, by D. H. Matheson. Directions for making twenty out-of-the-ordinary model boats with simple tools and materials. Teen age boys. Ryerson, $1.25.

Speech Training. A Handbook for Students by Musgrave Horner. Provides ample material for practice and demonstration. Macmillan, $1.80.

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Understanding Economics, by W. C. Bagley, Jr., and R. M. Perdew. A presentation of our economic life in its human aspects, as illustrated by the inhabitants of a typical village. Senior High School. Macmillan. $3.30.

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Using Our Language, Grades IX-X, by J. M. Paton and Allan Talbot. Designed to cover the work in composition and grammar for Grades IX-X. Dent, $1.35.

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Victorian Years, by Elie Halvey. Fourth volume of the six-volume "History of the English People in the Nineteenth Century". Covers the period 1841-1895. Grades 10-13. McC. & S., $5.00.

W

The Way of Adventure, by A. E. M. and J. C. Bayliss. Thrilling episodes from fiction and from fact. Grade IX-XI. Macmillan, 80c.

Weathercraft, by Athelstan F. Spilhaus. Tells scientific-minded girls and boys how to assemble and operate a home weather station. Ages 10 and up. Macmillan, $2.75.

Workbook for the Great Adventure, by Donalda Dickie. Workbook complete with references to other new texts in Canadian History. Grade VI-VIII. Dent, 75c.

Working Wonders with Words, by W. Womersley. A well-written guide to effective speaking by a Canadian. Dent, $3.50.

Y

The Younger Sister, by Godfrey Winn. The intimate story of H.R.H. Princess Margaret Rose. Illustrated. Grades 7-8. High School. Ryerson, $3.00.

Youth Faces its Problems, by N. L. Bossing and R. R. Martin. Senior high school text which introduces an effective technique for the intelligent story. Clarke, Irwin, $3.60.

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Using any productions of the above producers in conjunction with the new Viewlex provides a most effective visual teaching aid. The productions of these foremost producers have rapidly forged to the front, because of their technical excellence and approved subject matter.

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If you are considering buying a projector or material, we will be glad to send the above on approval.

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THE RYERSON PRESS
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AUDIO-VISUAL AIDS FOR THE SCHOOL

The C.E.A. Appoints Advisory Committee to N.F.B.

At the request of the National Film Board the Canadian Education Association has established an advisory committee to the Film Board which will collaborate with the Board in making NFB films more readily adaptable to use as visual aids in the schools.

Chairman of the NFB advisory committee is Dr. Stewart Tweedie, Director of the Department of University Extension and Adult Education, Winnipeg, Manitoba. The committee has eight members, including one representative of B.C.-Alberta, one from Saskatchewan-Manitoba, one from Ontario-Quebec, and one from the Atlantic provinces. Cities are represented by one member from Montreal-Toronto. In addition, the committee has one representative each from the Canadian Teachers' Federation, the Canadian Home and School and Parent-Teacher Federation, and the CEA. Mr. T. V. Adams, Supervisor of Programmes for the National Film Board, will be the committee's secretary.

The purpose of the committee will be to advise the NFB on the kind and preparation of films and film strips which would be of use as visual aids in education, to advise on the adaptation of films already made, and to give suggestions on the production of films being prepared for federal government departments to allow for their most effective use as classroom aids.

Films and filmstrips will not be stamped with the official approval of the committee, nor will the NFB, in educational matters, necessarily act on the committee's advice. However, the outright disapproval of the committee would be expected to have a very considerable weight. It is anticipated that its work will assist in making the films produced by the NFB more readily adaptable to use as visual aids.

An Opinion on Films in Education from Scotland

Stating that films "may become the textbooks of the future for certain aspects of certain subjects", and "that every type of visual aid should be available in every training institution", the Advisory Council on Education in Scotland has recommended that every school in the country be supplied with an episcope, a filmstrip projector and a 16 mm. silent projector.

In its report to the Secretary of State for Scotland, the Council has also recommended that every secondary school be supplied with a micro-projector for use in its science department; that a large secondary school have more than one film-strip projector, and ultimately have a 16 mm. sound projector of its own.

Until this can be achieved, the Council considers education authorities, by means of a mobile unit, should make 16 mm. sound projectors available for use in secondary schools, youth clubs and for post-school education.

The setting up of local film libraries in more populous areas and classes in manipulation of projection apparatus are also recommended by the Council.

Contemporary American Painting

A new series of five colour filmstrips on **Contemporary American Painting** released by Encyclopaedia Britannica Films makes a unique contribution to art education.

For the first time art students have readily available in all their original brilliance full-colour pictures showing a history of Twentieth Century painting in America. All of the great movements in contemporary American painting are thoroughly explained and illustrated.

The paintings of the 114 artists represented in the five filmstrips are from the famed Encyclopaedia Britannica Collection of Contemporary American Painting, which critics have called the greatest collection of American painting ever made.

An introductory filmstrip offers an illustrated guide to the appreciation of contemporary art. The remaining four filmstrips illustrate the schools of Realism, The American Scene, Romanticism, and Modernism with each accompanied by explanatory frames giving an overview of the significance of American art.

Pictorial Aid for Medical Study

A "colour atlas of pathology" has been completed by American scientists after six years of work under the auspices of the United States Naval Medical School of Washington. The volume, which contains more than 1,000 colour illustrations, is intended to provide students, doctors and technicians with a basic standard for studying and interpreting medical specimens seen with the naked eye or through a microscope. In the past many students have not been able to get a wide variety of specimens for study, of the sort which the atlas contains.

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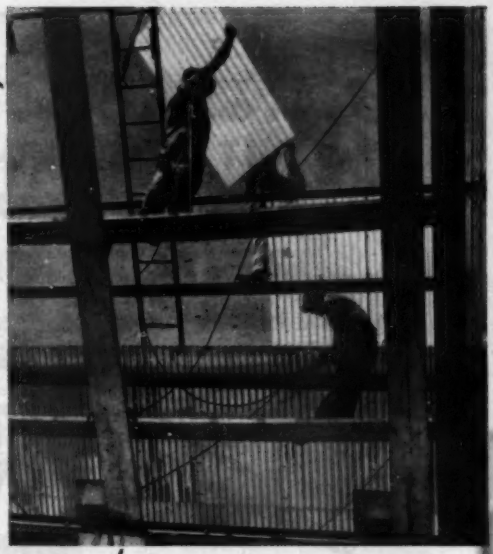

Glazing the window openings of a new University field house was easy with PLEXIGLAS. Lightweight, white translucent panels, corrugated to match the corrugations of the sheet metal, admit light freely and cut maintenance costs to a minimum.

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Film Selection Guides — Correlating Textbooks and Films.

Three-volume editions of "Film Selection Guides," correlating the use of some 332 of America's most widely used textbooks with 382 16mm. sound educational films and 60 filmstrips have been produced by Encyclopaedia Britannica Films.

The Film Selection Guides provide teachers with unit-by-unit listings of each of the 332 textbooks, and list the EBFilms which are correlated with each of these units. The guides are divided into three volumes, volume one covering books and films for the primary and elementary grades; volume two listing books and films for junior and senior high school science courses, and volume three covering junior and senior high school books and films on social studies.

The new Film Selection Guides were prepared by the research staff of Encyclopaedia Britannica Films in collaboration with 22 publishers whose books cover all aspects of the school curriculum. Efforts were made by surveys and by consultation with textbook publishers to find the most widely-used texts in the country, based on frequency of use, state adoptions and research carried on with heads of large school systems and of teacher training institutions.

The guides succeed the one-volume Textbook-Film Correlations previously published. The new guides contain a substantially greater number of both books and films, while many books no longer widely used or which have been replaced by newer books or editions have been eliminated.

All in all, the guides should help curriculum directors and school teachers everywhere select the right films for their audio-visual programmes, based on exact correlations with the textbooks which they are at present using in their courses.

The primary guide, largest of the three, contain's unit-by-unit cataloguing of 200 textbooks for the primary and middle grades published by 16 different publishers. The science guide has 73 books listed, representing the editions of 16 publishers, and the social studies book lists 59 books published by 13 publishers, with unit-by-unit film correlations embodied in each listing.

The Long House People—20 Minute colour film, National Film Board.

"The Long House People," a 20-minute colour film which portrays for the first time on the screen some of the authentic religious ceremonies and dances of the 1500-odd non-Christian members of the Canadian Six Nations Indians, has just been released by the National Film Board for educational purposes only.

The film, which shows the modern-day life of this minority group of Iroquois—who reside mainly in the vicinity of Brantford, Ontario, on land given them by a grateful Britain for their aid in the American Revolution—was made only after the National Film Board had promised to respect the Indians' wishes on all matters of production and distribution. The elders were afraid that theatrical audiences might ridicule their religious ceremonies.

"The Long House People" shows four main dance sequences: the Corn Dance, parts of which were once the dreaded war dance of the Iroquois; the Corn Dance, a service of thanksgiving to the Creator for a bountiful harvest; the False Face Ritual for healing the sick, a ceremony which few white men have ever seen let alone photographed; and to complete the cycle, the Condolence for a Dead Chief and the Installation of a New One.

Some of the best Indian dancers in North America are featured in the film. Reluctant to permit photographers to work in the Long House at Ohsweken, Ontario, because it is their church, the dancers were brought to Ottawa, where a replica of the Long House was built on the stage of the Little Theatre.

The name of the film, "The Long House People", comes from the old name for the whole Iroquois race, which once ruled the eastern half of North America.

From Canada to Cuba
7 OUT OF 10 CHOOSE MIRADO AS *SMOOTHER*
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It is believed that "The Long House People" will help satisfy a long-felt need in classrooms for visual information about the race which played so large a part in shaping the destiny of our continent.

Newfoundland Promotes Visual Education

The Department of Education of Newfoundland has announced that a subsidy valued at $100 is available to rural film councils that have purchased sound-film projectors for community use.

The subsidy consists of a portable screen, rewinds, splicer, set of reels and shipping cases. To qualify for the grant the council must show that it has purchased a machine within the year for the use of groups, including schools, in two communities.

The grants are made through Mr. F. R. Kennedy, department of education audio-visual supervisor. Mr. Kennedy is also the regional agent of the National Film Board of Canada, the federal government's producer and distributor of 16mm informational films.

Although the film movement is only two years old in Newfoundland, the island province now has 20 or more film councils. Since few schools have projectors, the Department of Education finds the assistance of projector-owning film councils most useful in its audio-visual programme.

Adventures With Numbers—Authentic Film Strips—Popular Science.

The abstract concepts of Middle Grades Arithmetic are presented simply and concretely in a new full-colour teaching filmstrip series, *Adventures With Numbers*, just produced by the Audio-Visual Division of Poular Science Publishing Company.

This series, which should be welcomed by elementary school teachers because it makes a difficult subject easier-to-teach, consists of six full-length strips "Making Change"; "Two Figure Divisors"; "Zero in Multiplication"; "Meaning of Decimals"; "Dividing with Decimals"; "Dividing a Whole Number by a Fraction". The six strips were prepared by Dr. Jesse Osborn, Mathematics Consultant, St. Louis Public Schools, assisted by the editorial boards of both Popular Science and Webster Publishing Companies, under the general editorship of Dr. David J. Goodman, Editor-in-Chief of Popular Science's Audio Visual Division.

Virtually every visual device of concretization is employed in these new Arithmetic filmstrips — cartoons, functional colour, pupil participation mechanisms, action quizzes montages, charts, picturized reviews, etc. All art work is completely original. Strips may be used with any good Arithmetic text, particularly with the Webster series, "Adventures with Numbers". With the series, comes a fully-illustrated, extensive Teaching Guide. Both strips and Guide are packaged in a hard-cover, sturdily bound file box.

"Spotlight No. 2" — Canadian Cameo Series—Associated Screen News

Associated Screen Studios' latest Canadian Cameo short subject release, "Spotlight No. 2", contains a wealth of information and little known facts concerning odd Canadiana.

How many Canadians know that there is a town in their country that has streets literally paved with gold—which has more taxis per capita than any other spot in Canada, and yet these cabs have only seven miles of roads on which to travel? The town is Yellowknife in the North West Territories, whose streets are constructed of low-grade gold ore!

The camera then covers the social activities of a group of human "skyscrapers", who have banded together into an organization known as the Tip Toppers Club, of Toronto. The prime requisite for admission into this unique Club is height—and plenty of it! Male applicants have to tower to 6' 2" or better, while the target for the fairer sex is 5' 8" and up.

The spotlight is then thrown in unusual clock faces in different cities and centres in Canada.

"Spotlight No. 2" not only affords ten minutes of quick-moving entertainment, it is instructive as well. This new film was directed by Gordon Sparling.

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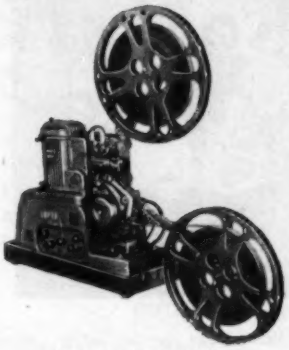
TODAY'S GREATEST PROJECTOR VALUES!



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Compact and Portable—The STYLIST can be readily moved from room to room. Quick and easy to set up . . . just lift off case, snap permanently attached reel arms in place and this new projector is ready to thread.

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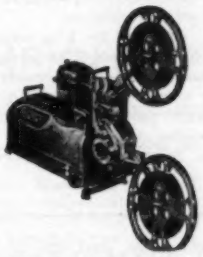

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For 2" x 2" slide and film strip. Fits extremely well into any program of Visual Education, permitting the projection of still pictures to large sizes for careful study. It projects either 2" x 2" still pictures in individual mounts or a series of still pictures on film strip. An inexpensive visual aid with varied applications. Unlimited teaching material is available.

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Across Canada, (782) services look to Red Feather contributions through their local Community Chest in carrying on their important work. *Your* dollars are vital — *give enough* through your Red Feather canvasser.

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MANUFACTURERS & EQUIPMENT NEWS

A Demonstration Course In Home Lighting

The importance of good lighting in the preparation and serving of food was demonstrated recently to the course in Food Technology of the Ryerson Institute of Technology, Toronto.

Presented at the Lighting Institute of Canadian General Electric Company, Dufferin Street, Toronto, the one-day course demonstrated to the home economists some of the ever-increasing variety of light sources. The lectures and demonstrations indicated the part light plays in the safety, efficiency and economy of food preparation and the increased enjoyment it can give to food consumption.

In addition to programs of this nature presented to secondary school, technological, and university students in a number of courses, the Lighting Institute shows the latest in lighting techniques to such groups as architects, lighting engineers, contractors and service men.

Underwood Opens New Montreal Building

Underwood Limited has opened a new branch building on Beaver Hall Hill in Montreal. Here, in one carefully planned centre, the company has provided every facility to serve the growing needs of business and industry throughout the great and expanding Montreal area.

The four storey building of brick, art stone and steel construction was specifically designed and built to the needs of an office equipment company, and the building itself reflects the character of the Underwood organization and its people. It is pleasant to work in, well-planned and efficient.

A thirty-eight foot display window along with indirect cold-cathode lighting are two important features which add considerably to the pleasant appearance of the new branch building in its strategic location on "the Hill".

Crystal Glass & Plastics Move to New Modern Plant

Crystal Glass & Plastics Limited are now established in their fine modern plant at 130 Queen's Quay at Jarvis St. in Toronto. This is now their permanent home, and the building has been planned and constructed to specifications in order to make their service as efficient as possible. Mr. H. Yates, manager of the Company, states that it is expected that improved facilities will enable the firm to expedite greatly the handling of all their requirements of manufacturing and distribution of their glass and plastic products and materials.

International Business Machines Open New Plant in Toronto

International Business Machines Company, Toronto, have moved to their modern new factory and head office on Don Mills Road, Toronto. The occasion of the opening of the plant included dedication ceremonies and a world-wide broadcast by shortwave from a Boston station. This internationally known firm is one of the most up-to-date in employee relations, and we understand that immediately adjacent to the new plant is their employee golf course and club.

Although the plant and head office will be on Don Mills Road, the sales office and service bureau will remain at 36 King St. E.

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The new "POSTURFORM" Desks are built to withstand the rigors of daily classroom use. They are designed for good posture, comfort and strength, so that pupils sit at ease and alert.

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The Desk here shows a flat top, open book-box. Also made with lifting-lid book box, sloping top.

THE GLOBE FURNITURE CO. LIMITED WATERLOO ONTARIO

National Stationers Limited in New Headquarters

National Stationers Limited, for many years representatives of Ellams duplicators, at 115 York Street, Toronto, have moved to new and more efficient quarters at 7 Soho Street, Toronto. In these modern quarters the management aims to provide more efficient service to schools generally.

The management also announces that in addition to the Ellams line, they have been appointed representatives for the Copy-Rite Liquid Process Duplicators and a full line of supplies of particular interest to school. School executives should make a note of the change of address from 115 York Street to 7 Soho Street, Toronto.

Eberhard Faber Open New Canadian Plant

The Eberhard Faber Pencil Co. of Canada Limited has opened a new plant at Acton Vale, Quebec. The Plant was officially opened at a formal gathering at Acton Vale, June 28th, by T. R. Rudel, President of the Eberhard Faber Pencil Company, U.S.A. and Canada.

Occupying a ten acre site, the new plant will house completely modern machinery and equipment for the manufacture of pencils, penholders and erasers. Capacity is planned to take care of ever increasing Canadian consumption and facilities are provided for expansion in the future. The new plant will be under the supervision of Eric Q. Bohlin, Vice-President in charge of Manufacturing, assisted by L. J. Harbour, Plant Supervisor.

In addition to the new Acton Vale Plant, the company also announces the opening of new sales offices at 48 York Street, Toronto, with other sales offices to be opened in major cities from coast to coast. Louis M. Brown, Vice-President in charge of Sales, who served as the company's first Canadian representative, has been associated with the Canadian stationery field since 1923. Jock McLaren will be Sales Manager with headquarters in Toronto.

T. R. Rudel, Canadian-born president of Eberhard Faber Pencil Company, is a native of Montreal, and attended Lower Canada College, completing his education at Princeton University. He served the company as sales promotion manager, sales manager and assistant to the president and was made a director in 1944. In 1949 he became president and chairman of the board, which position he holds today.

New Shop Equipment Firm

Notice has been received of the establishment of the firm of Cooper & Horton handling machine shop supplies in the school field. Services covered will include woodworking machinery, metalworking machinery, power and hand tools, industrial supplies and general vocational shop equipment.

Cooper & Horton have an office and warehouse at 1760 Dundas St. West, Toronto.

Welles-Wayne Buses

A striking evidence of the high value of the through-lock-bolt type of construction of Welles-Wayne buses, widely used in school transportation systems is seen in a recent rebuilding job carried out at Goose Bay, Labrador.

A T.C.A. bus in collision was badly damaged in the centre side. Ordinarily repair would require a complete new body, but with the Welles-Wayne type of construction the damaged panels were simply removed and new ones bolted into place.

This unit is opperated by Trans-Canada Airlines, and since it is a vital part of the service there, the speed with which it was repaired was an important factor.

On a hurry-up call, Welles Corporation Ltd., of Windsor, Ontario, makers of Welles-Wayne equipment, placed at the disposal of T.C.A. one of its mechanics, who was flown to Goose Bay with the necessary materials. In less than a week after arrival the bus was in daily service again, something which would have been impossible with the same amount of damage suffered by a bus of ordinary construction.

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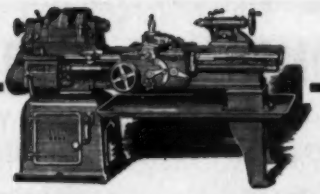

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HALIFAX MONTREAL OTTAWA TORONTO WINNIPEG CALGARY VANCOUVER VICTORIA

Metallic Bronze Lacquer Finishes

A new line of Metallic Bronze Lacquer finishes, claimed to offer substantial improvement over earlier formulations of this type, has been announced by National Lacquer and Paint Co., Inc., 7415-39 S. Green St., Chicago 21, Ill.

Fifteen shades are included in the standard line with other colours supplied on special order. Standard colours include various shades of Old English, Antique, Statuary, Gold, Copper, Brass, etc. All of these are designed to simulate closely the appearance of plated metal.

The formulation of these Metallic Bronze Lacquers is unique and represents a radical departure from earlier thinking among Industrial paint Chemists. No dyes or bronze powders are used. Particle size is controlled by rigid selection of raw materials to give maximum lustre and reflectivity. Complete dispersion of pigments is obtained through special processes which have been exclusively patented.

Another unusual feature is that "casting of shadows" has been totally eliminated. Colour and reflectivity are always the same when viewed from any angle. The manufacturer claims the products to be non-caking, non-jelling and relatively free from settling-out difficulties. All Colours are warranted to be light-fast and non-fading.

National Metallic Bronze Lacquers are recommended for any purpose where a metallic plated effect is desired; they are widely used for finishing floor and table lamps, caskets, ash trays, book ends, statuary and scores of objects, parts or articles of metal, wood, plastic, etc.

Testing samples of National Metallic Bronze Lacquers will be sent to interested manufacturers who supply detail information regarding their requirements and a colour sample of the shade wanted.

New In-Wall Folding Table and Bench Model Announced

Schieber Manufacturing Company, 12720 Burt Road, Detroit, Michigan, announces a new In-Wall Table and Bench Unit designed to accommodate numerous requests received from school officials across the country.

The new model features tables of the standard 13' 8" length but 25" instead of 30" in height. Benches are likewise 5" lower in the new model. It will seat 10 students on each side the same as always.

The new In-Wall unit will supplement and not replace the present standard model and was shown for the first time at the N.E.A. show at Atlantic City in February.

It is claimed that the lower benches allow smaller children to rest their feet on the floor contributing to better posture. While primarily intended for smaller children older students and even adults do not find it awkward or uncomfortable.

Special counter balancing has been incorporated to make the new 25" In-Wall model just as easy to operate as the 30" model. The cabinet in which it installs in the wall is also the same size.

West Sanikleen

West Disinfecting Company announce an interesting new product which should be of real value to schools in the new West Sanikleen cleaning compound. It is understood that only one ounce of the new West Sanikleen for one gallon of water economically cleans and sanitizes walls in one operation. A combination of a quarternary ammonium compound and a compatible synthetic detergent, Sanikleen is also commended for windows, dishes, eating utensils, glasses and a variety of floor surfaces. This product, which sanitizes as it cleans, should be very welcome in all school maintenance departments.

Solve Your School Shop Problems

This Equation Shows You The "Short-Cut" Way:

DONNOLLY Tool Supplies + Service by DONNOLLY = WELL EQUIPPED, EFFICIENT SHOPS

Woodworking Lathes — Table Saws — Band Saws — Jointers — Drill Presses — Portable Routers — Sanders — Forges — Sheet Metal Equipment — Work Benches — Draughting Boards — Hand and Power Tools and Supplies.

JAMES T. DONNOLLY COMPANY LIMITED

SUPPLY HOUSE FOR SCHOOL SHOPS

321 KING ST. WEST, TORONTO

Miter Gage Clamp Attachment

The Power Tool Division, Rockwell Manufacturing Company, Milwaukee 1, Wisconsin, announces the availability of a clamp attachment No. 865 for the standard Delta miter gage. This device is an added convenience, especially valuable when making accurate miter cuts and when cutting irregular stock. It consists of a bracket and two clamps which hold the work firmly in position. It can be attached to any standard Delta miter gage. The miter gage and clamp attachment can be used on 8" and 10" Delta circular saws, band saws, spindle shaper, and abrasive finishing machines. The No. 865 clamp attachment is sold through the Delta dealer organization. The Power Tool Division, Rockwell Manufacturing Company, Milwaukee 1, Winsonsin, will be glad to give further information.

New Scientific Catalogue Published

Scientific Instrument Manufacturers of Canada announce the publication of the Joint Catlogue Listing Participating Member Companies and manufactured products.

Of importance to purchasing agents, interested consumers and those engaged in research and scientific work is a comprehensive list of products available which are manufactured in Canada. Approximately 8 full pages of products listing is included in catalogue.

Member Companies are co-operating with the Catalogue Committee in pooling mailing lists which will include almost every institution throughout Canada.

Copies of the catalogue will also be provided to responsible authorities.

Companies and institutions who wish to be sure of receiving their copy of the SIMAC Joint Catalogue should send their request to SIMAC, P.O. Box 57, Postal Station "A", Toronto.

Bulletin on Successful Lighting

Publication of a new illumination bulletin entitled, "Interior Design Data", is announced by Northern Electric Company Limited. This bulletin, one of the most comprehensive of its kind, contains 15 pages of information on the design of lighting installations for commercial and industrial purposes.

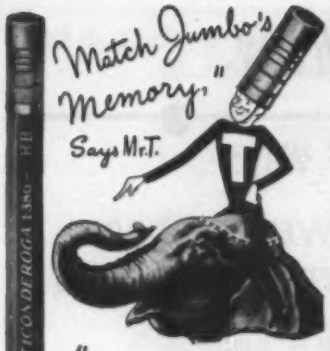
In the margins of two pages are 12 colour chips of typical interior flat wall paints. Each chip shows the reflection factor for that particular shade. Elsewhere are illustrations of 68 specific lighting units, together with technical data on their typical distribution curves, height spacing ratios, maintenance factors, efficiencies and coefficient of utilisation tables.

Another feature of the new bulletin is a very complete table of recommended values of illumination, from airplane manufacturing areas to the interior of vehicles. Two more pages are filled with incadescent and flourescent lamp data. The back cover carries information on current literature available from The Illumination Engineering Society.

Copies of "Interior Design Data" may be obtained from Northern Electric Company Limited, Department 65, 1600 Notre Dame Street West, Montreal, Quebec.

Plastic Pushbutton Crayon Holder

Ontario Textiles Limited (Toy Division) announce the production of a plastic pushbutton crayon holder which should be of practical use in schools. The holder is constructed of strong coloured plastic and is supplied in the following six colours to identify crayons: red, black, blue, green, brown and yellow. The idea of the holder is to enable crayons to be used down to the last inch, and also eliminate wastage by melting and breakage. The holder will take the usual standard makes of crayons and may be obtained either with fillers or empty. It is suggested that schools write to the Ontario Textiles Limited, 84 Wellington Street West, for full information and prices.



"It's easy to match Jumbo's memory when you use a Dixon Ticonderoga . . . the pencil that helps you remember! Write with the strong, smooth leads . . . see the clean legible outlines. Note the eraser firmly locked in a strong metal ferrule with double yellow bands. And it's not likely you'll forget

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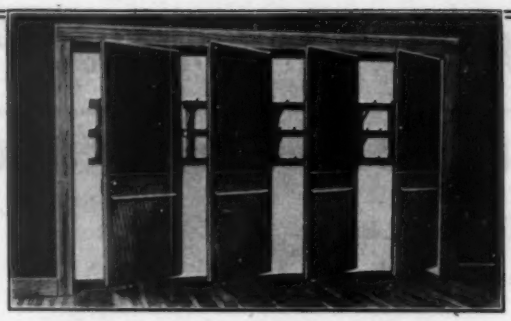
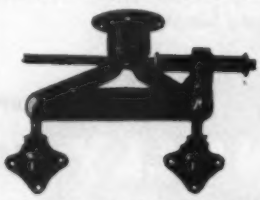
MADE IN 9 DEGREES FROM 2B TO 4H
Order from dealer by the dozen or by the gross
DIXON PENCIL COMPANY LIMITED
MONTREAL · NEWMARKET · TORONTO · VANCOUVER



DOOR HARDWARE FOR DISAPPEARING WARDROBES

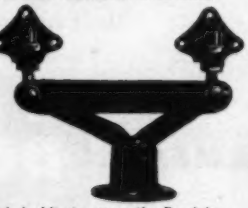
SAVES SPACE
Placed side by side for adjoining rooms, saves up to 7' 6" over old style cloak-rooms.

ADDS SECURITY
Petty pilfering is eliminated — under teacher's supervision at all times.



No. 778 HARDWARE

Cuts Show Upper and Lower Units



No. 778 Standard Specification with Leading School Architects across the Dominion

Richards-Wilcox
CANADIAN COMPANY LIMITED
LONDON, ONTARIO
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Automatic Insect Control

A newly developed scientific method of fly control works uninterruptedly—day and night—requires no labour whatsoever — operates simply, swiftly and silently in dealing death to flies—is claimed to be odourless, and not to affect humans, animals or foodstuffs.

It was developed under strict supervision and it contains no acetone or kerosene, as found in ordinary sprays. It is claimed that it will not stain walls, ceilings or furnishings.

Automatic "Insect Control" is an ingenious, simple mechanism that is thermostatically controlled to work automaticaly and vapourize a special formula insecticide. It is affixed to the wall about three feet below the ceiling and plugs into any standard AC or DC outlet. If doors and windows are closed during the night the premises will be free or flies in the morning; and, flies that enter during the day are killed in short order.

Automatic "Insect Control" is claimed to provide absolute control of flies, gnats, mosquitoes, etc. It protects against disease, spoiled food, etc., and brings cleanliness to the premises. Units are sold through franchised distributors. Write for information to Remington Products Corp., 410 N. Broad St., Elizabeth, N.J., U.S.A.

An Atomic Age Clock

In a radical departure from all conventional methods of measuring time, an atomic clock—invariant with age and for the first time independent of astronomical observations—has been developed by the National Bureau of Standards in Washington. Based on a constant, natural vibration frequency of atoms in the ammonia molecule, the atomic clock is a scientific achievement which offers an entirely new primary standard of frequency and time. Its principle promises to free man from age-old methods of fixing time by the daily rotation of the earth on its axis, as it revolves around the sun. The primary standard, the earth, is very gradually slowing down and, in addition, unaccountable fluctuntions in the rate of rotation have sporadically lengthened and shortened the day. The new method offers an invariant master clock against which the variation in timekeeping of the earth could be measured.

Announcing New Huntington Model 95 Wet-Dry Vacuum Cleaner

Huntington Laboratories announce a new lightweight Model 95 Silent Huntington Vacuum Cleaner, as successor to Huntington's Model 90 unit.

Construction changes in the new model makes it one of the most portable heavy-duty machines on the market. It weighs only 30 pounds. Three-caster mounting prevents teetering on uneven floors, and the machine's low centre of gravity and 27½" height make it easily manoeuverable in confined areas.

The Huntington Model 95 operates without belts. It is said to have extremely low power requirements, operating on 0-60 cycles with a 5/7 h.p. motor for 1½" air orifice and hose.

The Silent Huntington Model 95 with standard dry equipment includes a 10-foot, 1½" flexible hose, steel floor cleaning wand, floor tool, upholstery tool, air filter bag, and 35-foot pull-out proof rubber cord plug set.

The 5"7 h.p. motor develops a maximum water lift of 57 inches. The machine has a capacity of 1½ bushels or 9½ gallons. Write Huntington Laboratories, of Canada Limited, 72 Duchess St., Toronto.

YOU CAN BEAT THE METAL SHORTAGE...

If You Order NOW!

The rapid deterioration in the supply of metals—especially of brass—is already a major factor affecting deliveries of Dudley Combination Padlocks.

For the present, stocks of metal on hand are sufficient to guarantee delivery of ORDERS PLACED NOW . . . The position beyond the last quarter of 1951 cannot be forecast!

Schools and Colleges are strongly urged to assess their needs of Dudley Padlocks and to order early, before defence or war orders take priority.

The Dudley "STUDENT SALES PLAN", now almost standard practice in schools throughout Canada, will continue in operation in spite of supply difficulties and rising costs.

Full information on the unique advantages of this plan will be gladly sent on request.

THE Dudley LOCK

DUDLEY LOCK DIVISION OF UNITED-CARR FASTENER COMPANY OF CANADA LIMITED • TORONTO, CANADA

New South Bend Toolroom Lathe

A new line of small precision toolroom lathes is now being manufactured by the South Bend Lathe Works. Known as the "Light Ten," these lathes take work up to ten inches in diameter over the bed. Swing over cross slide is 6¼", and distance between centers varies from 16⅛" to 28⅛", depending on bed length. Driven by a ½ h.p. motor, ample power is provided for all work within the capacity of the lathe. The headstock is back geared, providing spindle speeds ranging from 48 to 1435 r.p.m.

Designed primarily for precision toolroom work, this new toolroom lathe is economical to own and operate. It takes less power and space than larger, heavier sizes and will perform as well or better on work within its capacity. Large handwheels, micrometer graduated feed collars, and convenient controls reduce operator fatigue and help prevent mistakes. It is delivered completely equipped with a precision lead screw having .0015", or less, lead variation in any one foot; a handwheel draw-in collet attachment (less collets); collet rack; taper attachment; thread dial indicator; thread cutting stop; lare face plate; and a micrometer carriage stop. Tailstock spindle has 1/10" graduations and tailstock screw has micrometer collar reading in thousandths. Regular equipment includes power feed apron; graduated compound rest; small face plate; tool post; two 60-degree centers; headstock spindle center sleeve; and a quick change gear box providing a thread cutting range of 48 pitches, 4 to 224 per inch R.H. or L.H., and 48 longitudinal power feeds. Carriage lock is provided for precision facing operations.

For complete specifications and prices of the new South Bend Light Ten Toolroom Lathe, write to A. R. Williams Machinery Mfg. Co. Ltd., 62 Front St. W., Toronto.

Walker-Turner Division Appoints Education Department Head

The Walker-Turner Division, Kearney & Trecker Corporation announces the appointment of Mr. Fred Finsterbach as the Director of Education. Mr. Finsterbach will have charge of sales training, the development of instruction booklets and sales aids of interest to both industries and schools.

Mr. Finsterbach comes from New York State Teachers College at Buffalo, where he was Assistant Professor of Industrial Arts. He has, also, served as Senior Education Supervisor for the New York State Education Department at Albany. During the war, he assisted in the development of the State Training Schools for airplane mechanics.

He is a graduate of the State Teachers College at Buffalo, where he received a B.S. Degree in Industrial Education. He has, also, studied at Wayne University, receiving the Masters Degree in Education. Mr. Finsterbach has completed residence requirements for the Doctorate Degree at the University of Buffalo and will receive the Degree shortly. His industrial experience has included work with the Sencer-Lens Division of the American Optical Co., the Empire Engineering Co. of Detroit, the Chevrolet Motor Co. of Buffalo, and the Worman Advertising Co. of Buffalo.

Menlo Fluoretor

Individual visual study of the fluorescent properties of a wide range of substances under ultraviolet light, in the classroom, laboratory and on field trips, is made possible by the newly developed Menlo Fluoretor blacklight source.

A completely portable instrument weighing less than two pounds, the Fluoretor has a patented dark chamber in which materials are observed. Its use anywhere, regardless of outside light conditions, thus is made possible. Interchangeable end caps adapted to liquids, dusts or solids extend its usefulness into such fields of study as geology, biology, mineralogy, chemistry, ceramics, medicine, sanitation, metal materials, etc.

Producing ultraviolet radiation at either 2537 or 3660 Angstrom units, with interchangeable heads, the Fluoretor operates from two standard flashlight batteries, with operating life in excess of 3 hours of continuous radiation. The light-tight dark chamber into which the ultraviolet radiation is projected, is fitted with a focussing eyepiece providing three-power magnification.

Standard Flouertor model includes six detachable end caps with various types of mountings, including test tubes, special fitting for microscope slides, etc.

For full information write Menlo Research, Laboratory, Menlo Park Calif., U.S.A.

clearing at

from 25% to

5% of Cost

SAMPLES and SURPLUS STOCK

including:—

All Felt Blackboard Erasers - - - - 10 Gross

Ink Well Glasses, No. 2 - 500

Ink Wells, Boston - Tops and Glasses - - 240

Modelling Tools and Wood Models

Kindergarden Gifts, First to Sixth - - - - 70

Number Builders - - - 500

20 PUPILS' DESKS

Movable chair desks for Primary Grade –

$10.00 each

This is all unused equipment

Full details, complete list, and samples, if desired, will be sent to any School Principal or Board interested in these unusual savings.

Everything offered subject to prior sale. This advertisement will not be repeated.

FRANK G. McKAY CO. LTD.

36 Wellington St. W. Toronto 1, Ont.

EMpire 4-6035

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SCHOOL PROGRESS

Editorial and Business Offices

57 Bloor Street West Toronto, Ontario

Will Your New School Make Students Brighter?

Of course, no school building can increase a child's basic intelligence.

But, through better physical environment, you *can* better students' alertness, initiative and interest —can even help them raise their grades.

For example, the great majority of children show marked improvement when moved from stuffy, overheated surroundings to classrooms in which level temperatures, adequate fresh air and proper humidity are constantly provided.

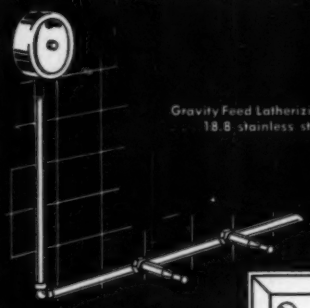
Knowing this, more and more educators are choosing Honeywell automatic controls for their new schools. Honeywell equipment has been *proved* more accurate, more dependable. Honeywell controls are simpler, too—consistently cost less to maintain. And Honeywell has the largest, most widespread staff of service experts in the industry.

You owe it to your students *and* your budget to get all the facts and figures about Honeywell controls for *your* new school. It's easy to do. Simply call your local Honeywell office. Or write Minneapolis Honeywell Regulator Co. Ltd., Leaside, Toronto, 17.

MINNEAPOLIS **Honeywell**

First in Controls

OFFICES COAST TO COAST IN
HALIFAX, MONTREAL, OTTAWA, HAMILTON, LONDON, WINNIPEG, CALGARY, EDMONTON, VANCOUVER



Gravity Feed Latherizing Soap Systems. 18.8 stainless steel valves.

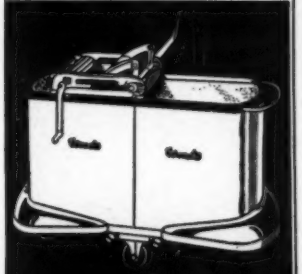
Chrome-plated Lathurn Liquid Soap Dispenser with 18.8 stainless steel valves provides a rich creamy lather.

No. 91 Liquid Soap Dispenser. Leak-proof; equipped with stainless steel valves.

No. 94 Liquid Soap Dispenser. Leak-proof; pump action; delivers a measured quantity of soap as required.

Specify GH Wood's SANITATION EQUIPMENT

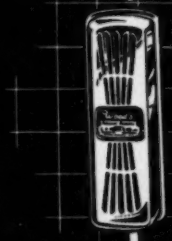
- **The best equipment for maintaining buildings in the most modern, sanitary manner.**
- **Wood's has 24 branches from coast to coast and 135 sanitation salesmen.**
- **May we submit specifications and quotations?**



Mop Trucks and Floor Maintenance Equipment. This Mop Truck is entirely self-contained; two 22½ gallon tanks.

Floor Scrubbing and Polishing Machines. Equipped with full 15 brushes. C.S.A. approved.

Self-closing, Fire-proof Waste Receptacles (with or without paper towel dispensers.) Various types and sizes.



Wood's Registered Deodorizers will positively re-condition the air in public toilets and washrooms.

Wood's Electric Water Cooler. Automatic thermostatic control assures constant supply of cool water.

Wood's SANITATION FOR THE NATION

G. H. WOOD & COMPANY LIMITED

MONTREAL TORONTO VANCOUVER

Branches throughout Canada